

Project Study Area



Burrowing Owl Survey Areas Burrowing Owl Assessment



Hermes Copper Butterfly Survey Areas

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NNV, Non-native Vegetation

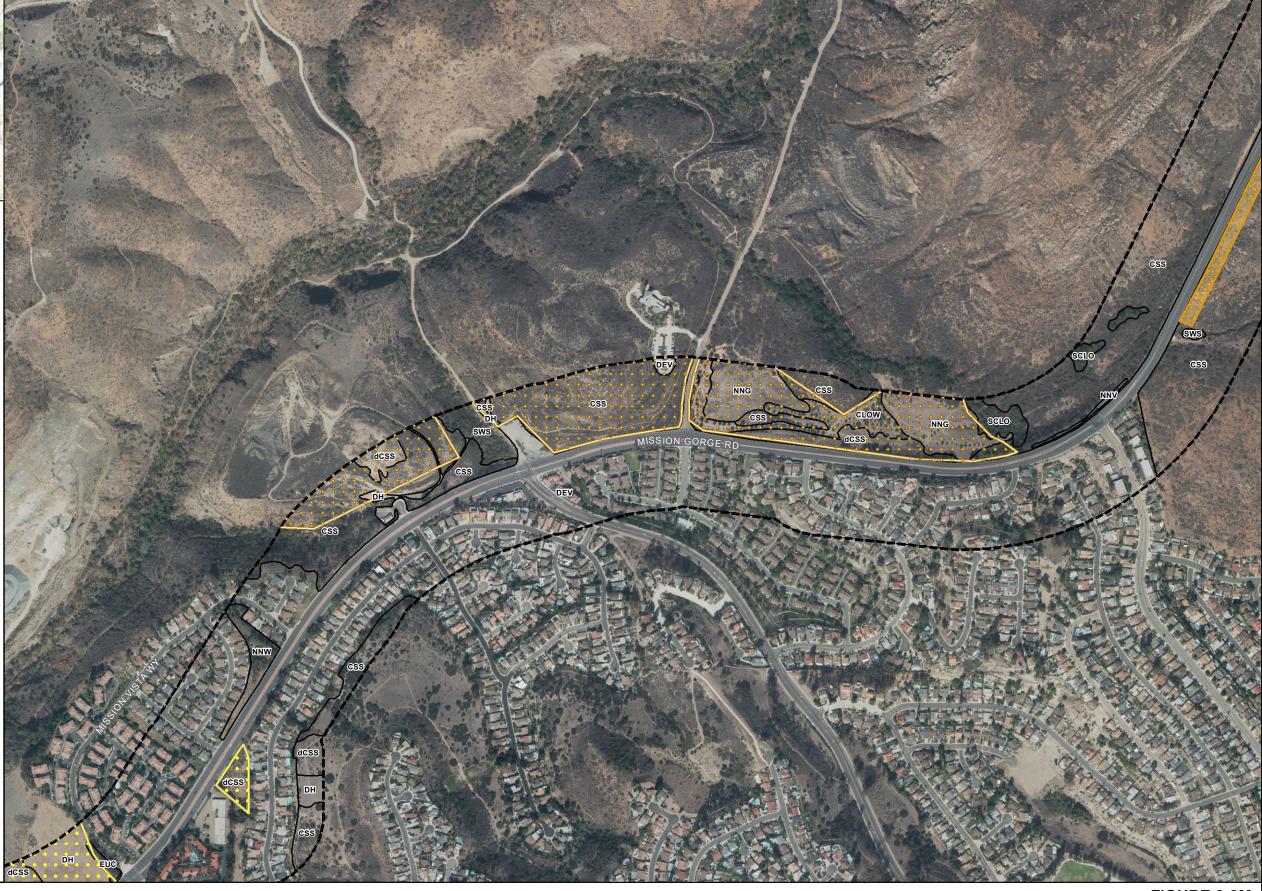
NNW, Non-native Woodland

SCLO, Southern Coast Live Oak Riparian

SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage

Scrub

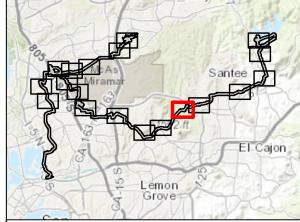




SOURCE: SANDAG, 2016

FIGURE 2-2M

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area



No Survey Access **Burrowing Owl Survey Areas**



Burrowing Owl Assessment



Hermes Copper Butterfly Survey Areas

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NNV, Non-native Vegetation

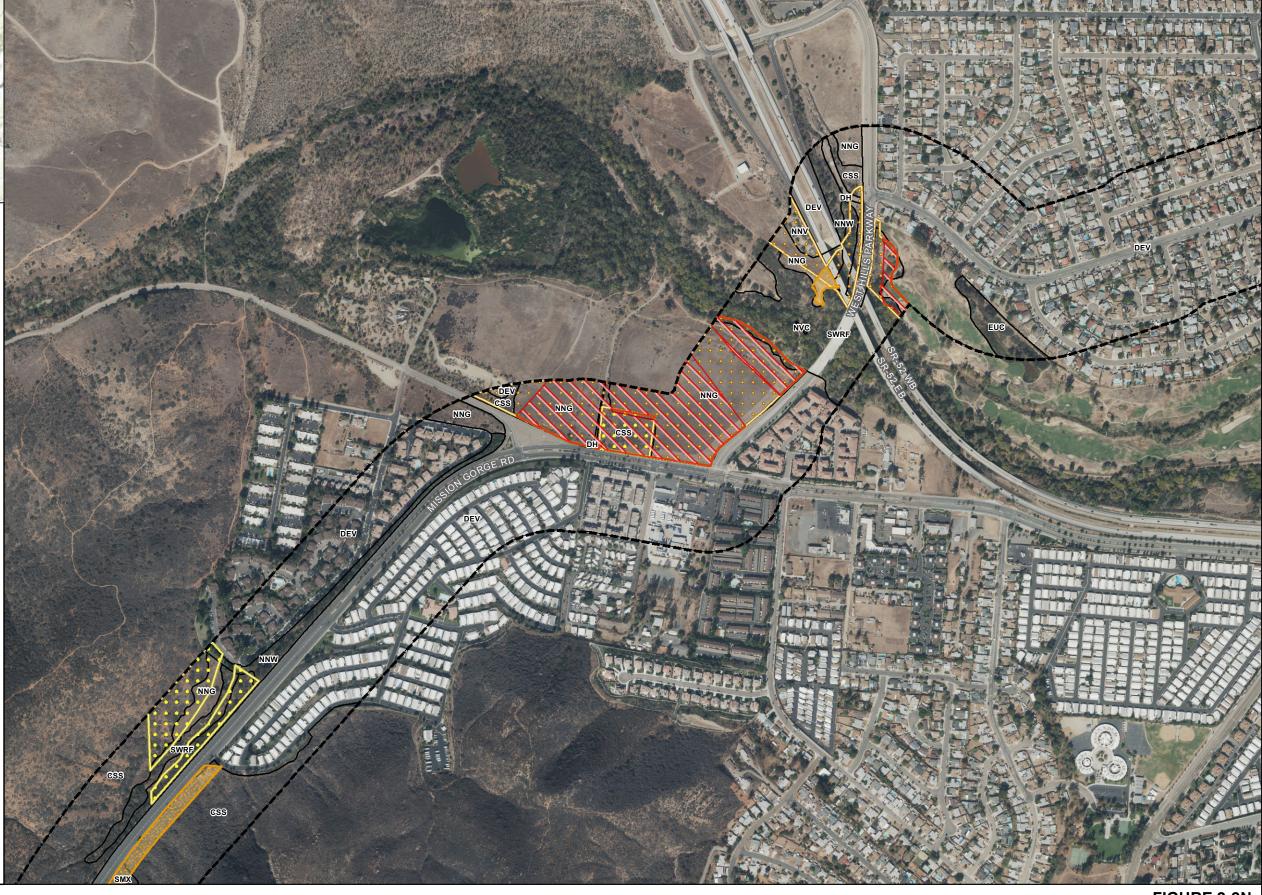
NNW, Non-native Woodland NVC, Non-vegetated Channel or

Floodway

SMX, Southern Mixed Chaparral

SWRF, Southern Arroyo Willow Riparian

Forest



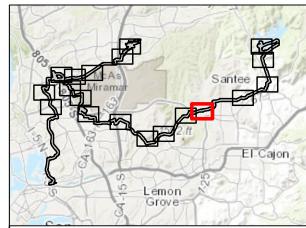


DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-2N

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area

Burrowing Owl Assessment

Vegetation Communities/Land Covers

DEV, Urban/Developed

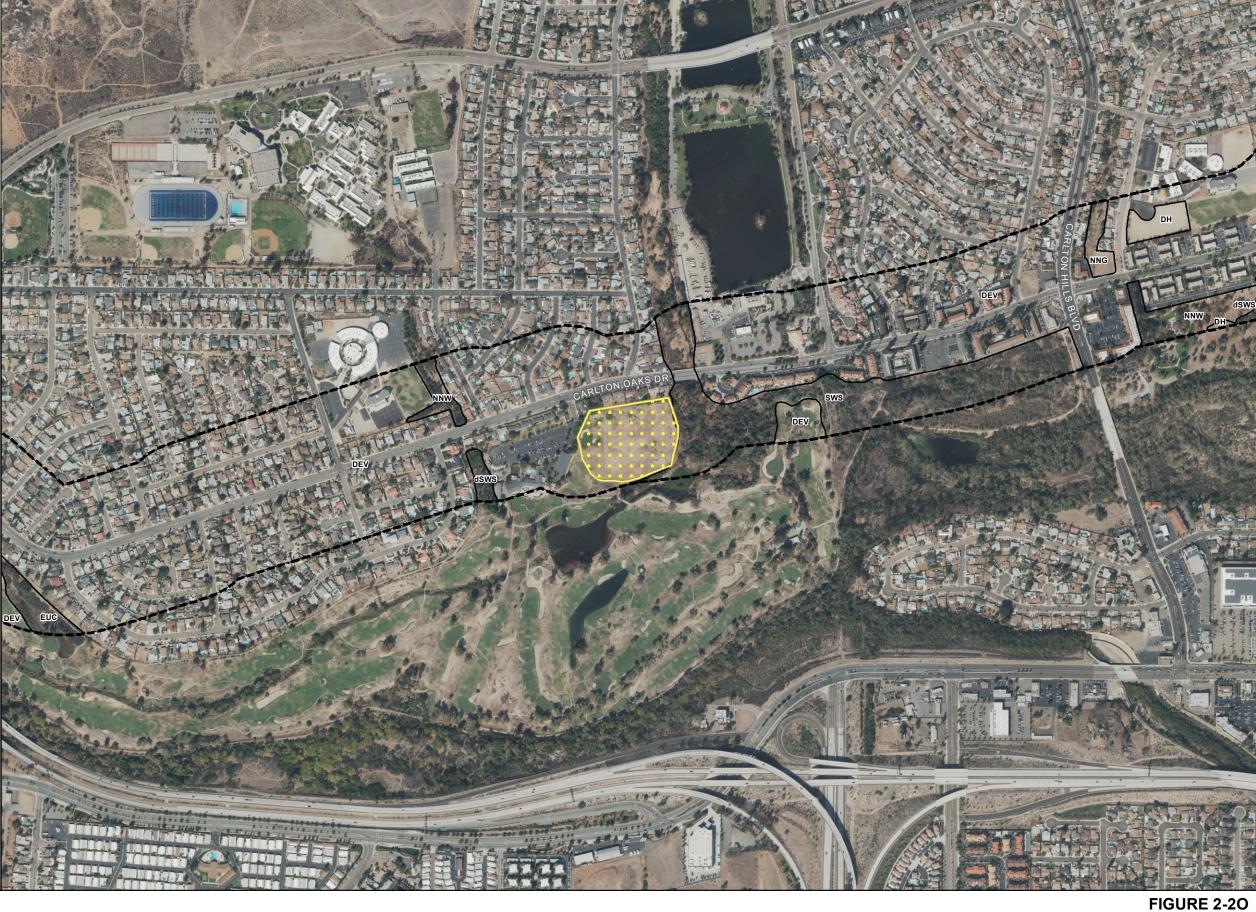
DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NNW, Non-native Woodland SWS, Southern Willow Scrub

dSWS, disturbed Southern Willow Scrub

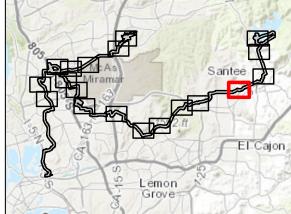




DUDEK

SOURCE: SANDAG, 2016

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area

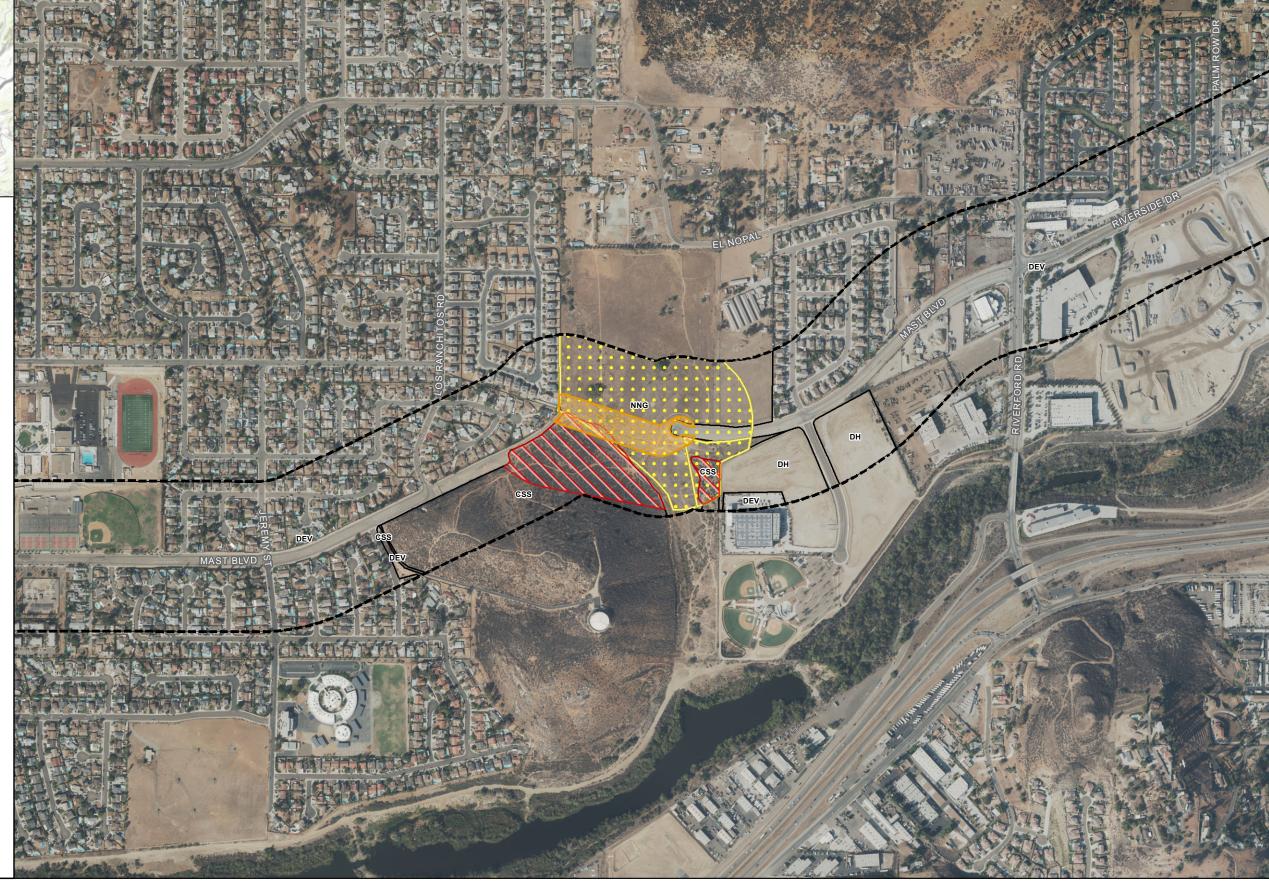


No Survey Access



Burrowing Owl Assessment Hermes Copper Butterfly Survey Areas

Vegetation Communities/Land Covers CSS, Diegan Coastal Sage Scrub DEV, Urban/Developed DH, Disturbed Habitat NNG, Non-native Grassland

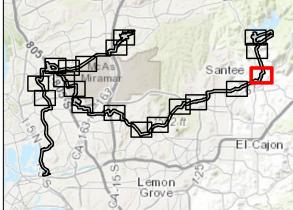




SOURCE: SANDAG, 2016

FIGURE 2-2P

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area



No Survey Access **Burrowing Owl Assessment**



Hermes Copper Butterfly Survey Areas

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NVC, Non-vegetated Channel or

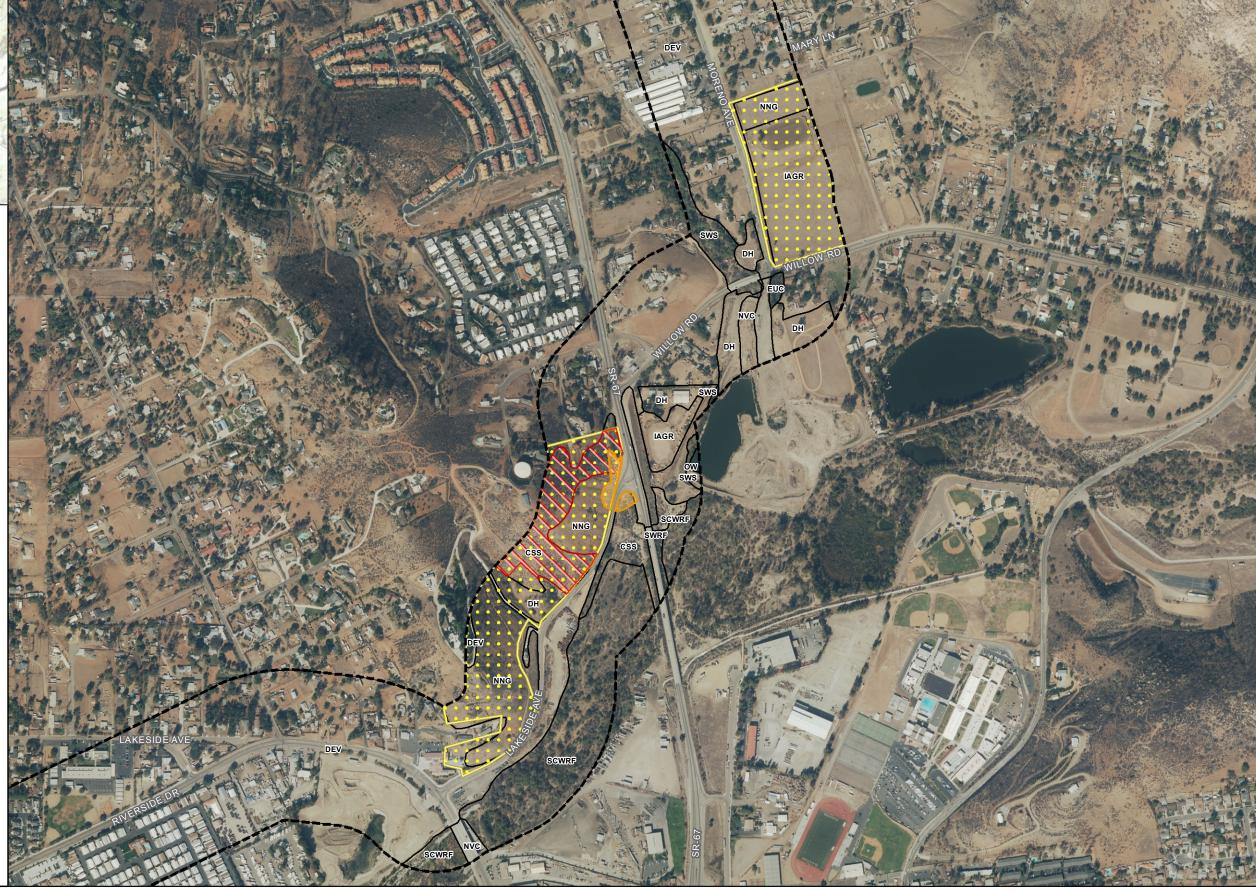
Floodway

OW, Open Water

SCWRF, Southern Cottonwood-Willow Riparian Forest

SWRF, Southern Arroyo Willow Riparian

SWS, Southern Willow Scrub



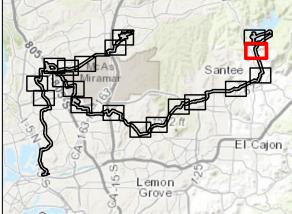


DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-2Q

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area



Burrowing Owl Survey Areas Burrowing Owl Assessment



Hermes Copper Butterfly Survey Areas

Vegetation Communities/Land Covers

AGR, General Agriculture

ARU, Arundo-Dominated Riparian

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub
CSS-r, Diegan Coastal Sage Scrub-

Restored

DEV, Urban/Developed

DH, Disturbed Habitat

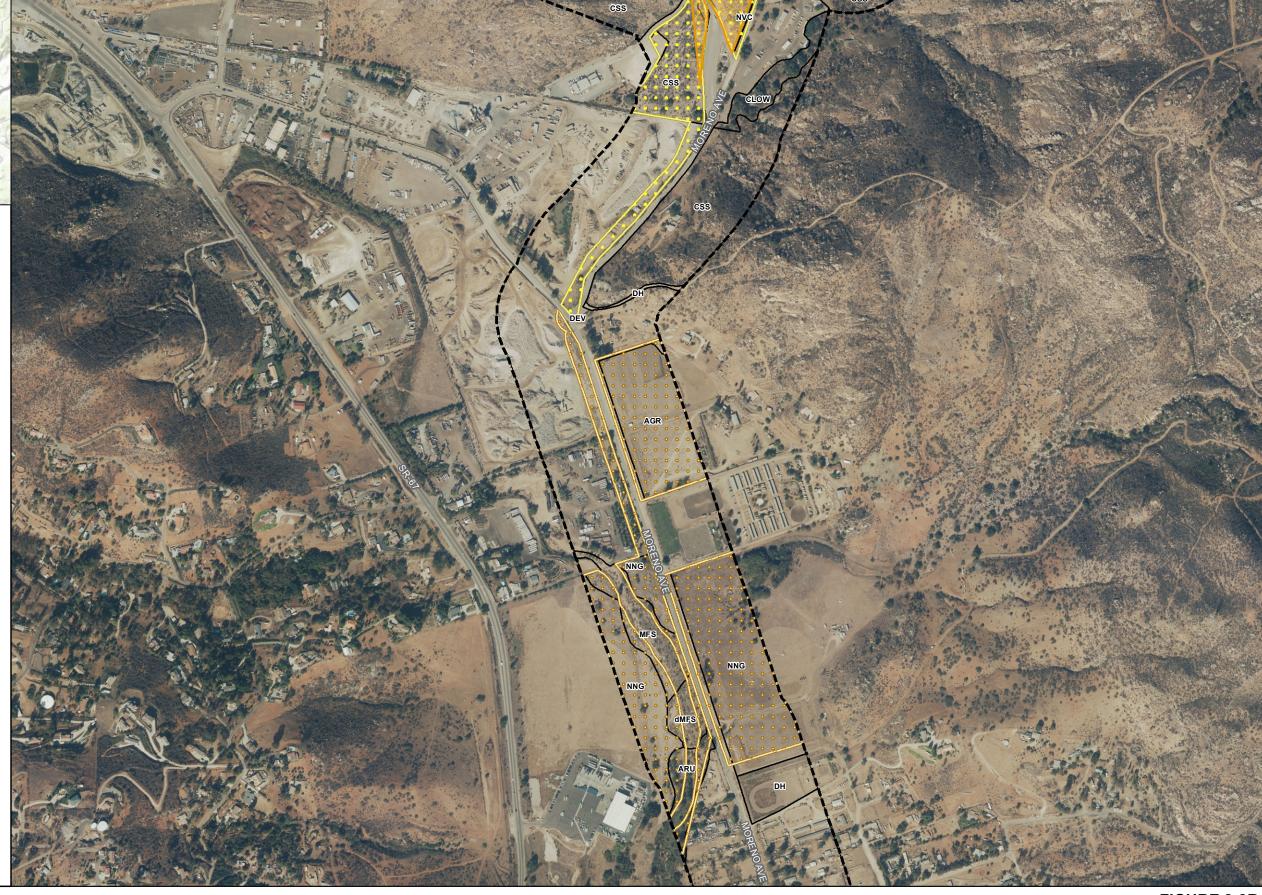
MFS, Mulefat Scrub

NNG, Non-native Grassland

NVC, Non-vegetated Channel or

Floodway

dMFS, disturbed Mulefat Scrub



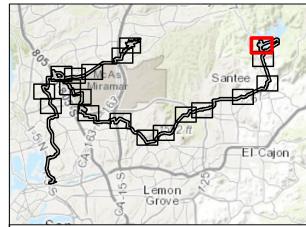


DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-2R

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



Project Study Area



Burrowing Owl Assessment



Hermes Copper Butterfly Survey Areas Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland CSS, Diegan Coastal Sage Scrub

CSS-r, Diegan Coastal Sage Scrub-Restored

DEV, Urban/Developed

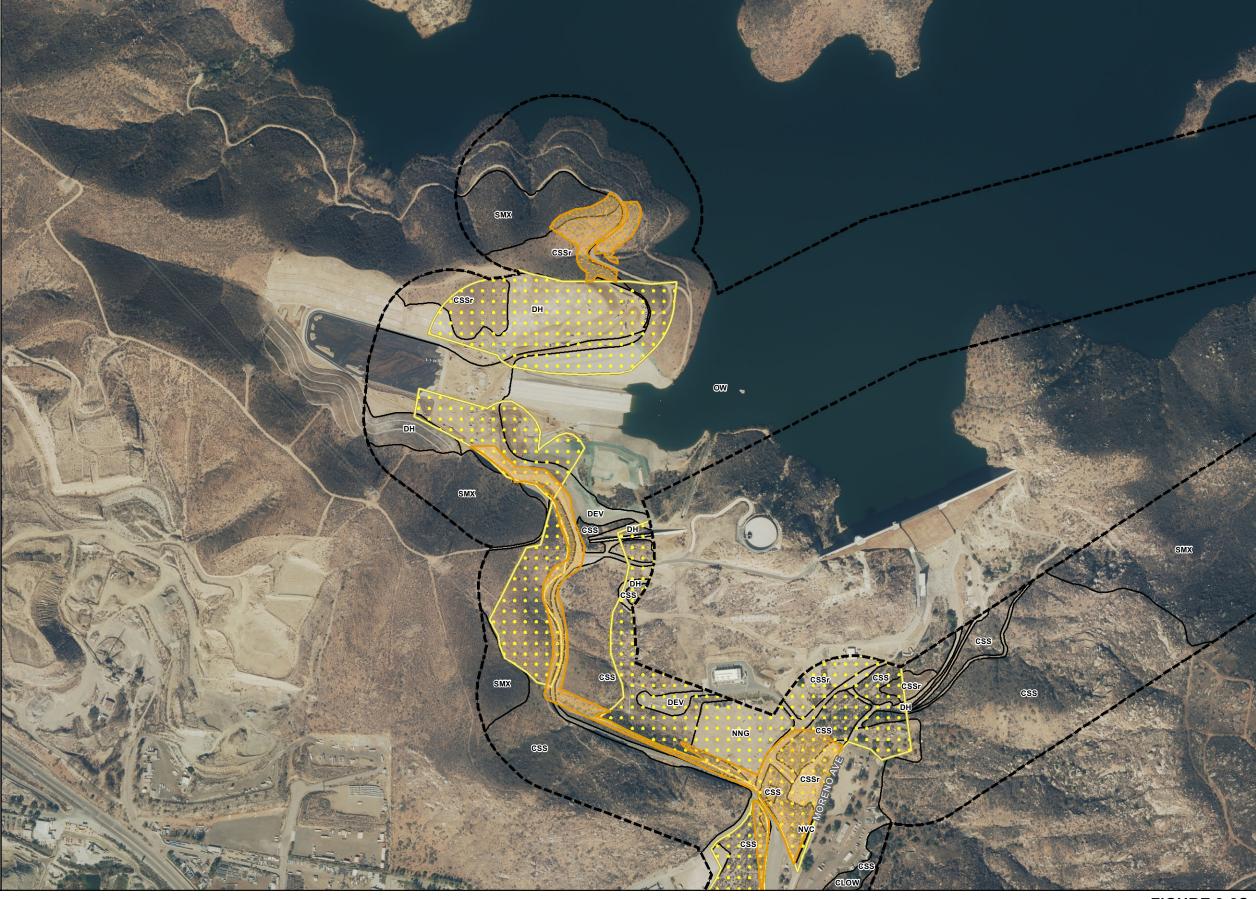
DH, Disturbed Habitat

NNG, Non-native Grassland

NVC, Non-vegetated Channel or Floodway

OW, Open Water

SMX, Southern Mixed Chaparral



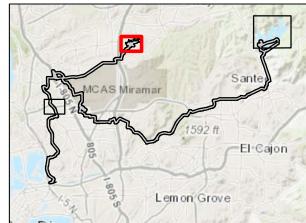


DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-2S

Burrowing Owl and Hermes Copper Butterfly Survey Areas and Results



 \Box

Project Study Area



Western Pond Turtle Location



Western Pond Turtle Survey Area
Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub CSS-CHP, Coastal Sage-Chaparral Transition

DEV, Urban/Developed

DH, Disturbed Habitat

DW, Disturbed Wetland

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

MFS, Mulefat Scrub

NNG, Non-native Grassland

NNV, Non-native Vegetation

NNW, Non-native Woodland

OW, Open Water

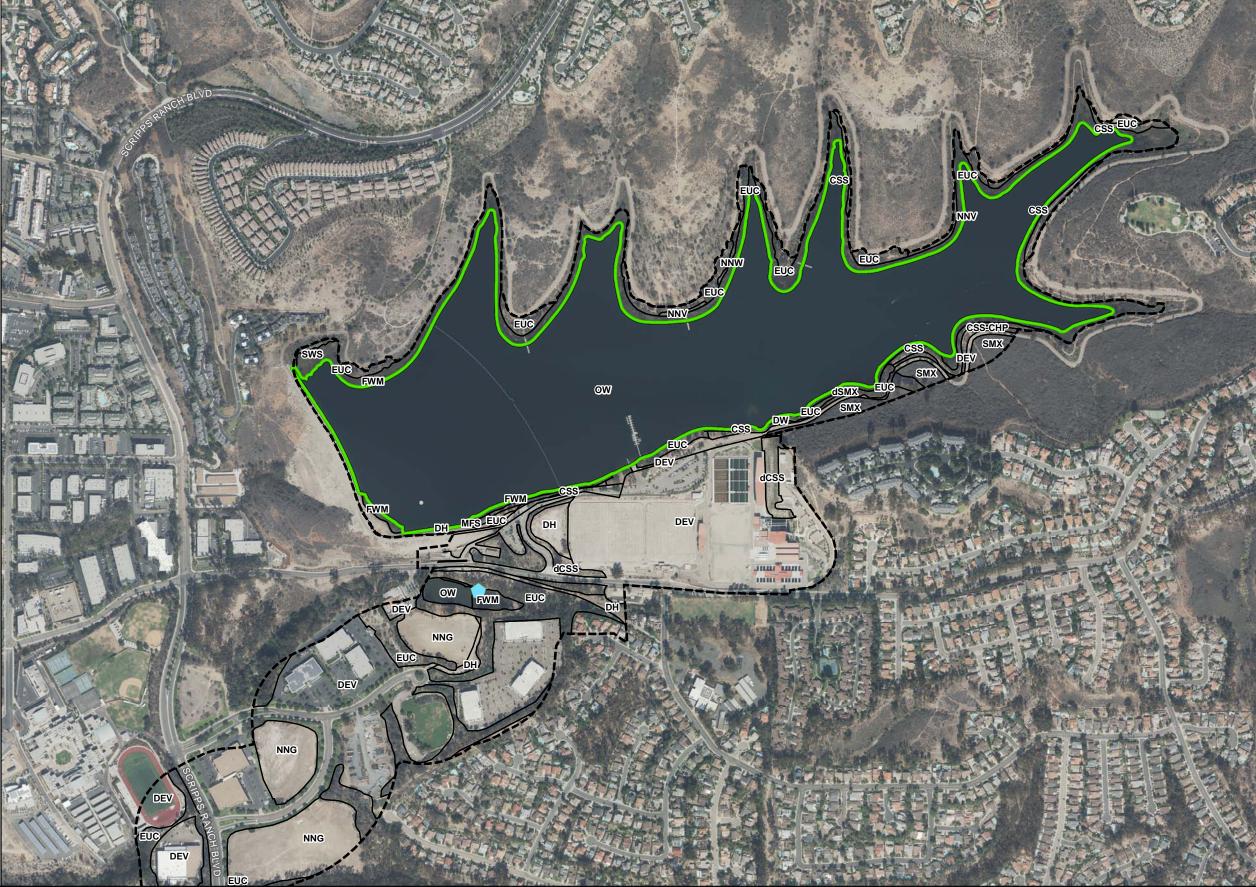
SMX, Southern Mixed Chaparral

SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage

dCSSB, disturbed Diegan Coastal Sage Scrub: Baccharis-dominated

dSMX, disturbed Southern Mixed Chaparral





DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-3A

Western Pond Turtle Survey Areas and Results



Project Study Area

Western Pond Turtle Survey Area

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland CSS, Diegan Coastal Sage Scrub CSS-r, Diegan Coastal Sage Scrub-Restored

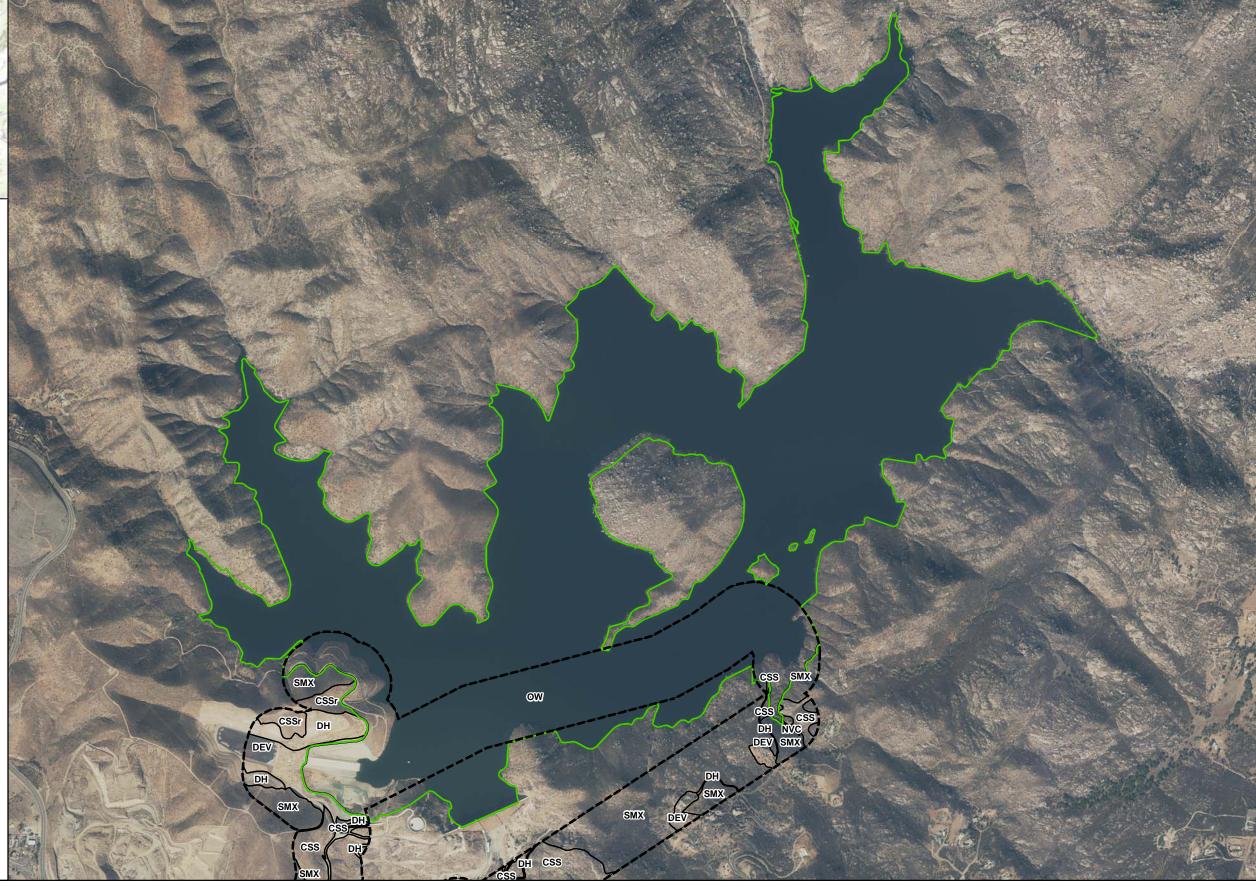
DEV, Urban/Developed

DH, Disturbed Habitat

NVC, Non-vegetated Channel or Floodway

OW, Open Water

SMX, Southern Mixed Chaparral



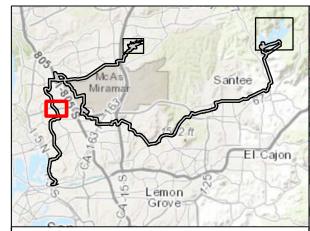
b — 5

DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-3B
Western Pond Turtle Survey Areas and Results

Biological Resources Report for the North City Project



Project Study Area



Western Pond Turtle Location

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

CSSB, Diegan Coastal Sage Scrub: Baccharis-dominated

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

MFS, Mulefat Scrub

NNG, Non-native Grassland

NNV, Non-native Vegetation

NVC, Non-vegetated Channel or

SCLO, Southern Coast Live Oak Riparian Forest

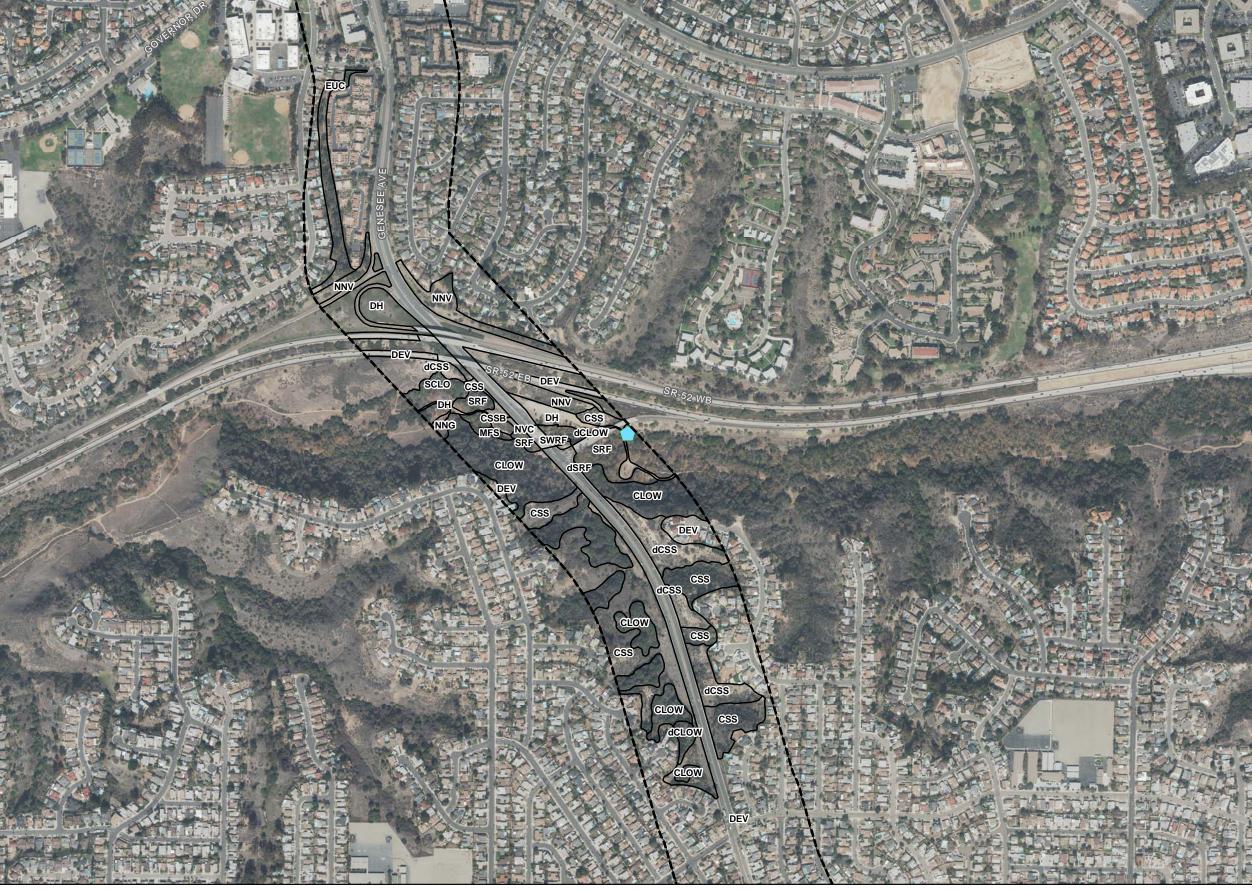
SRF, Southern Riparian Forest

SWRF, Southern Arroyo Willow Riparian

dCLOW, disturbed Coast Live Oak Woodland

dCSS, disturbed Diegan Coastal Sage Scrub

dSRF, disturbed Southern Riparian Forest



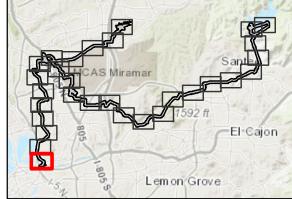


DUDEK

SOURCE: SANDAG, 2016

FIGURE 2-3C

Western Pond Turtle Survey Areas and Results



Project Study Area

-- Coastal Zone Boundary

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

Morena Pump Station - Overflow Pipes

Project Facilities

Morena Pump Station

Sensitive Plants

Juncus acutus ssp. leopoldii

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Wetland or Riparian Area (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

ARU, Arundo-Dominated Riparian

CAM, Cismontane Alkali Marsh DEV, Urban/Developed

DEV-CC, Developed - Concrete Channel

DH, Disturbed Habitat

DW, Disturbed Wetland

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

HW, Herbaceous Wetland

MFS, Mulefat Scrub

NNV, Non-native Vegetation

NVC, Non-vegetated Channel or Floodway

OW, Open Water

SWS, Southern Willow Scrub

dSWS, disturbed Southern Willow Scrub

Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1A

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

-- Coastal Zone Boundary

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

Vegetation Communities/Land Covers

DEV, Urban/Developed

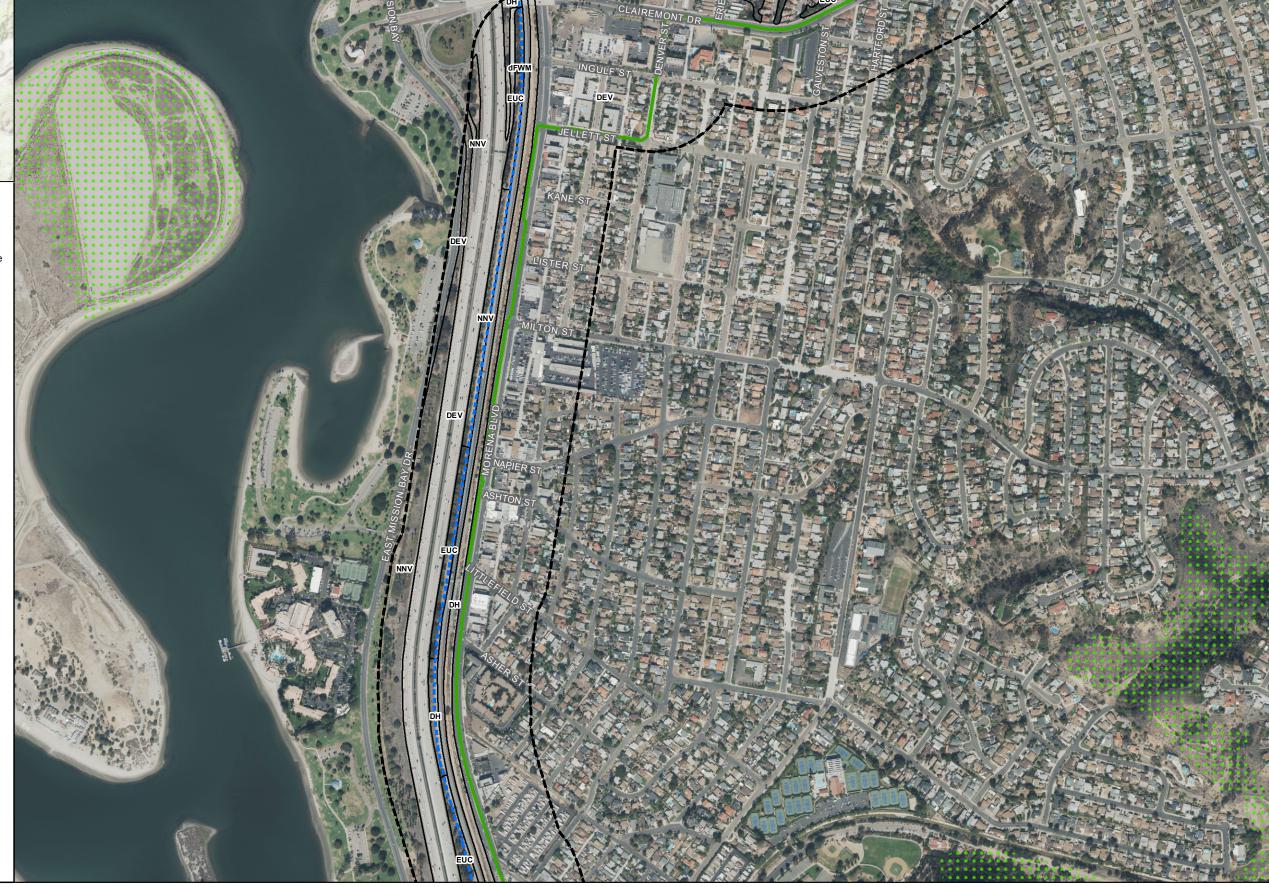
DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNV, Non-native Vegetation

dFWM, disturbed Coastal and Valley Freshwater Marsh

Multi-Habitat Planning Area



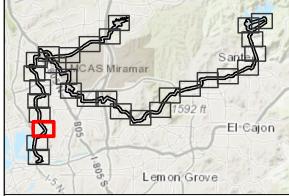


Feet

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1B

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

-- Coastal Zone Boundary

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland NNV, Non-native Vegetation

Multi-Habitat Planning Area

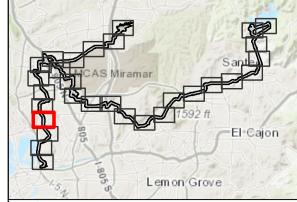




SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1C

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

-- Coastal Zone Boundary

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

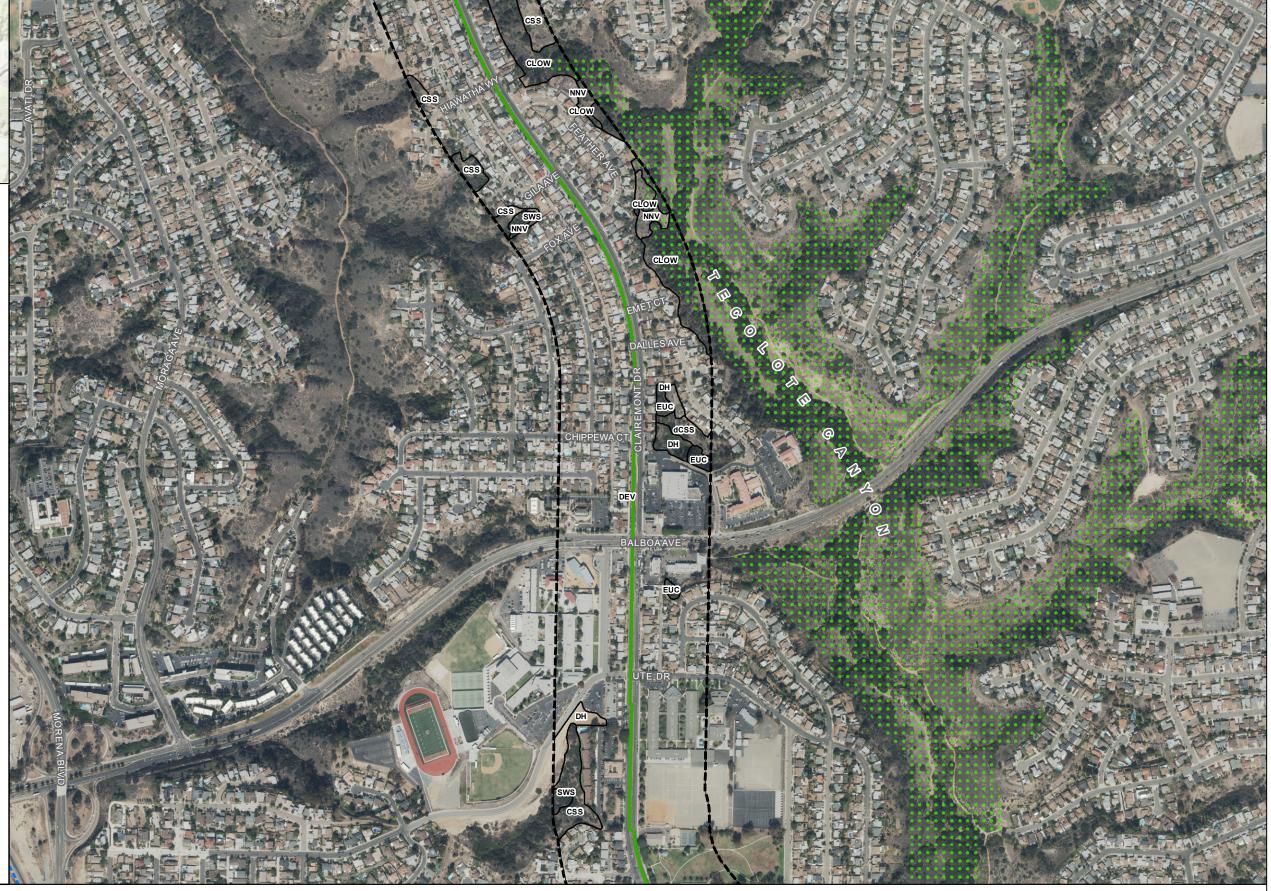
DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNV, Non-native Vegetation SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage Scrub

Multi-Habitat Planning Area

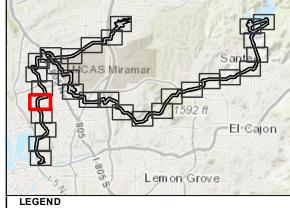




SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1D

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

Project Pipeline Alternatives

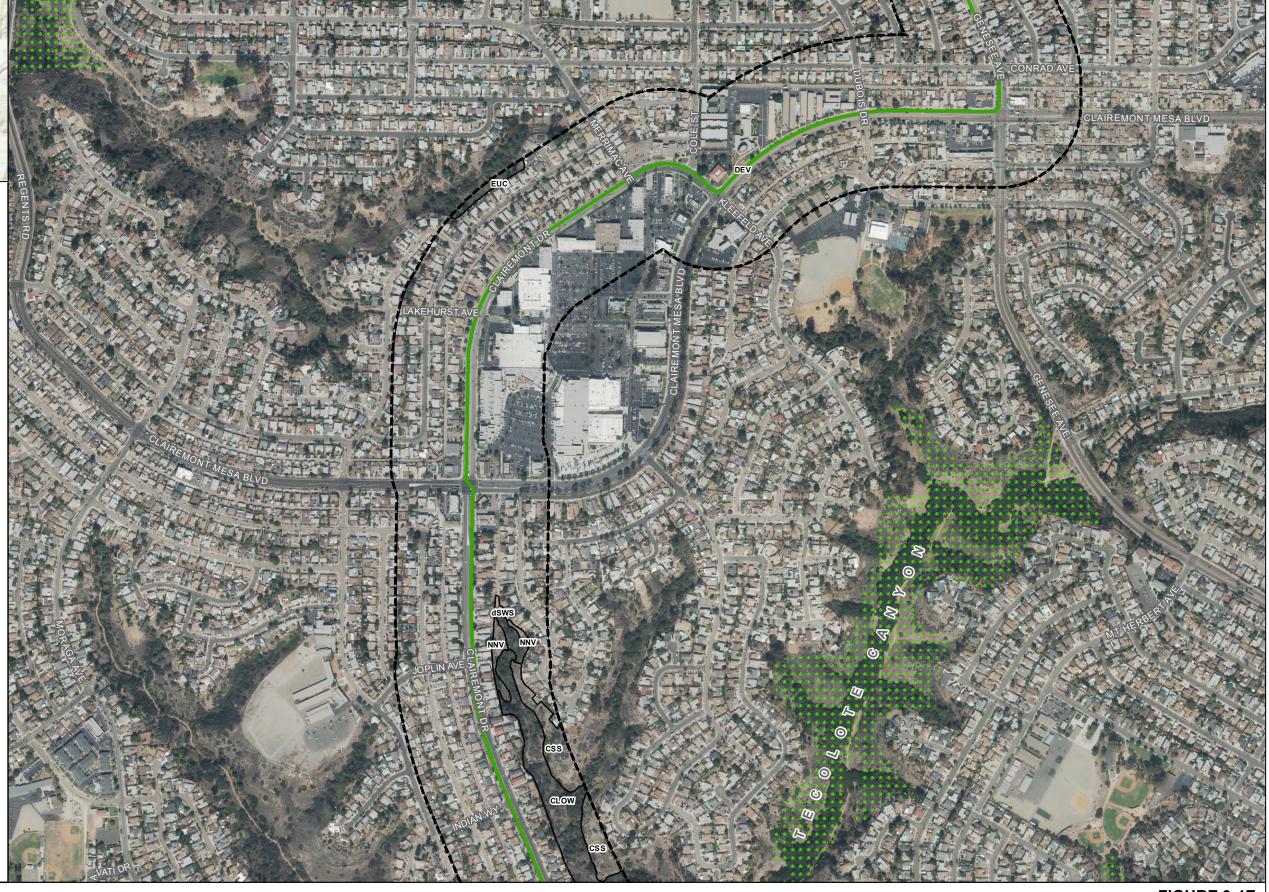
Morena Wastewater Forcemain and Brine/Centrate Line

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland CSS, Diegan Coastal Sage Scrub DEV, Urban/Developed EUC, Eucalyptus Woodland

NNV, Non-native Vegetation dSWS, disturbed Southern Willow Scrub

Multi-Habitat Planning Area

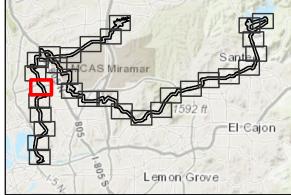




SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1E

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

-- Trenchless Segments of Alignment

Special Status Species

coastal California gnatcatcher

western pond turtle

Sensitive Plants

Artemisia palmeri

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Wetland or Riparian Area (CDFW Only)

Non-wetland Water (ACOE/RWCQB)/Riparian Area (CDFW)

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

CSSB, Diegan Coastal Sage Scrub: Baccharis-dominated

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

MFS, Mulefat Scrub NNG, Non-native Grassland

NNV, Non-native Vegetation

NVC, Non-vegetated Channel or Floodway

SCLO, Southern Coast Live Oak Riparian Forest

SRF, Southern Riparian Forest

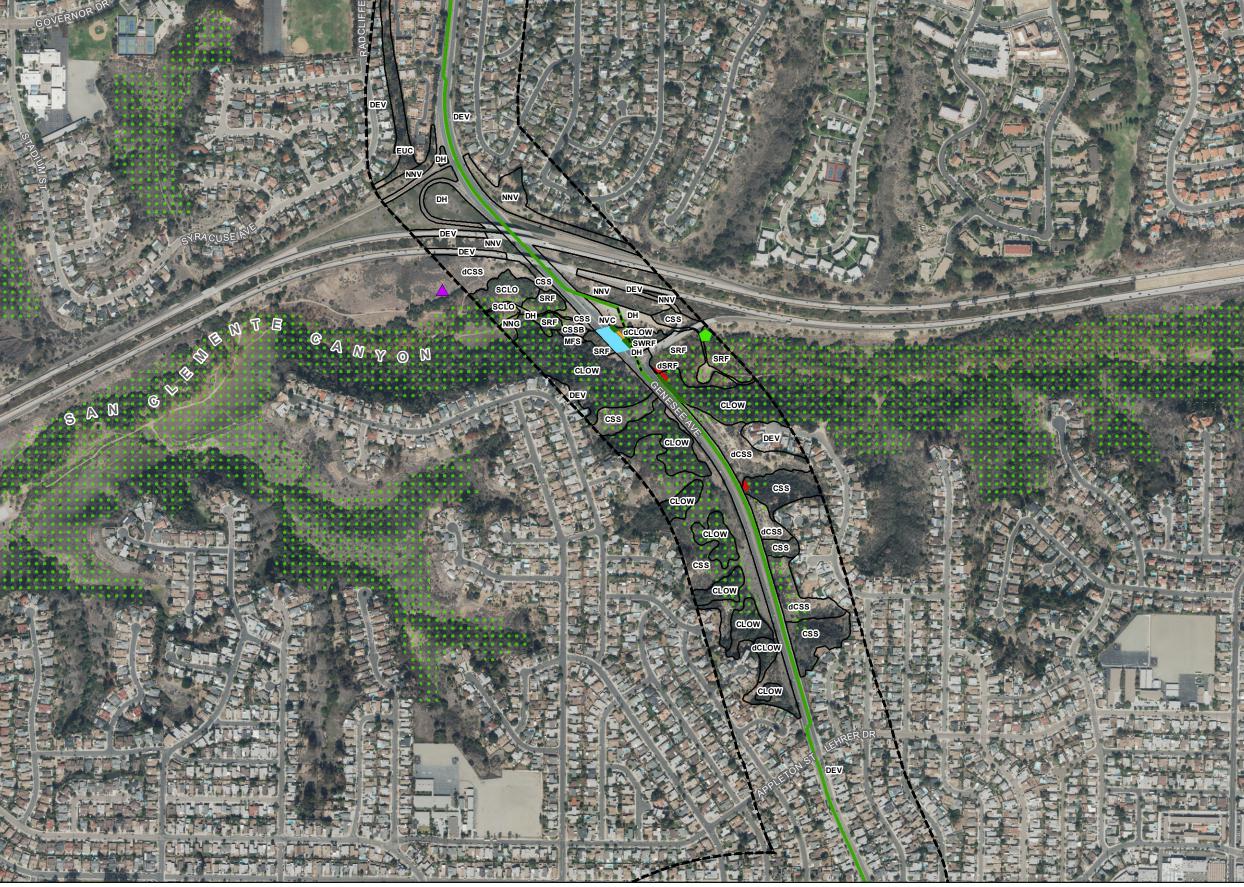
SWRF, Southern Arroyo Willow Riparian Forest

dCLOW, disturbed Coast Live Oak Woodland

dCSS, disturbed Diegan Coastal Sage Scrub

dSRF, disturbed Southern Riparian Forest

Multi-Habitat Planning Area



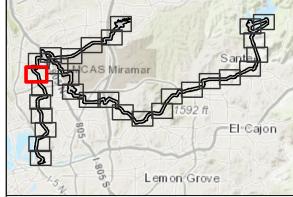


Feet

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1F

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

Project Pipeline Alternatives

Morena Wastewater Forcemain and Brine/Centrate Line

-- Trenchless Segments of Alignment

Special Status Species

△ Cooper's hawk

yellow warbler

Sensitive Plants

Ceanothus verrucosus

lva hayesiana

Romneya coulteri

Vegetation Communities/Land Covers CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

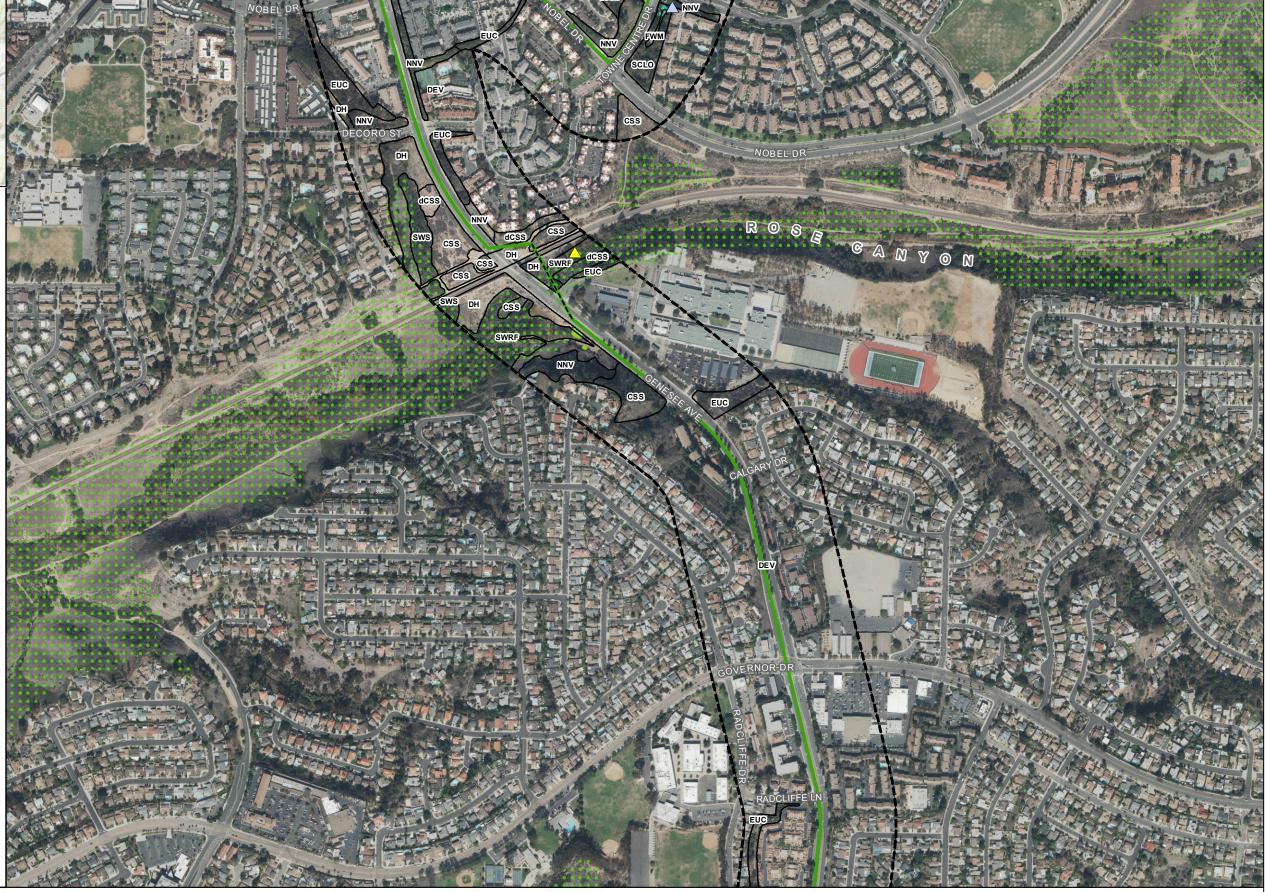
NNV, Non-native Vegetation

SCLO, Southern Coast Live Oak Riparian Forest

SWRF, Southern Arroyo Willow Riparian Forest

SWS, Southern Willow Scrub dCSS, disturbed Diegan Coastal Sage Scrub

Multi-Habitat Planning Area

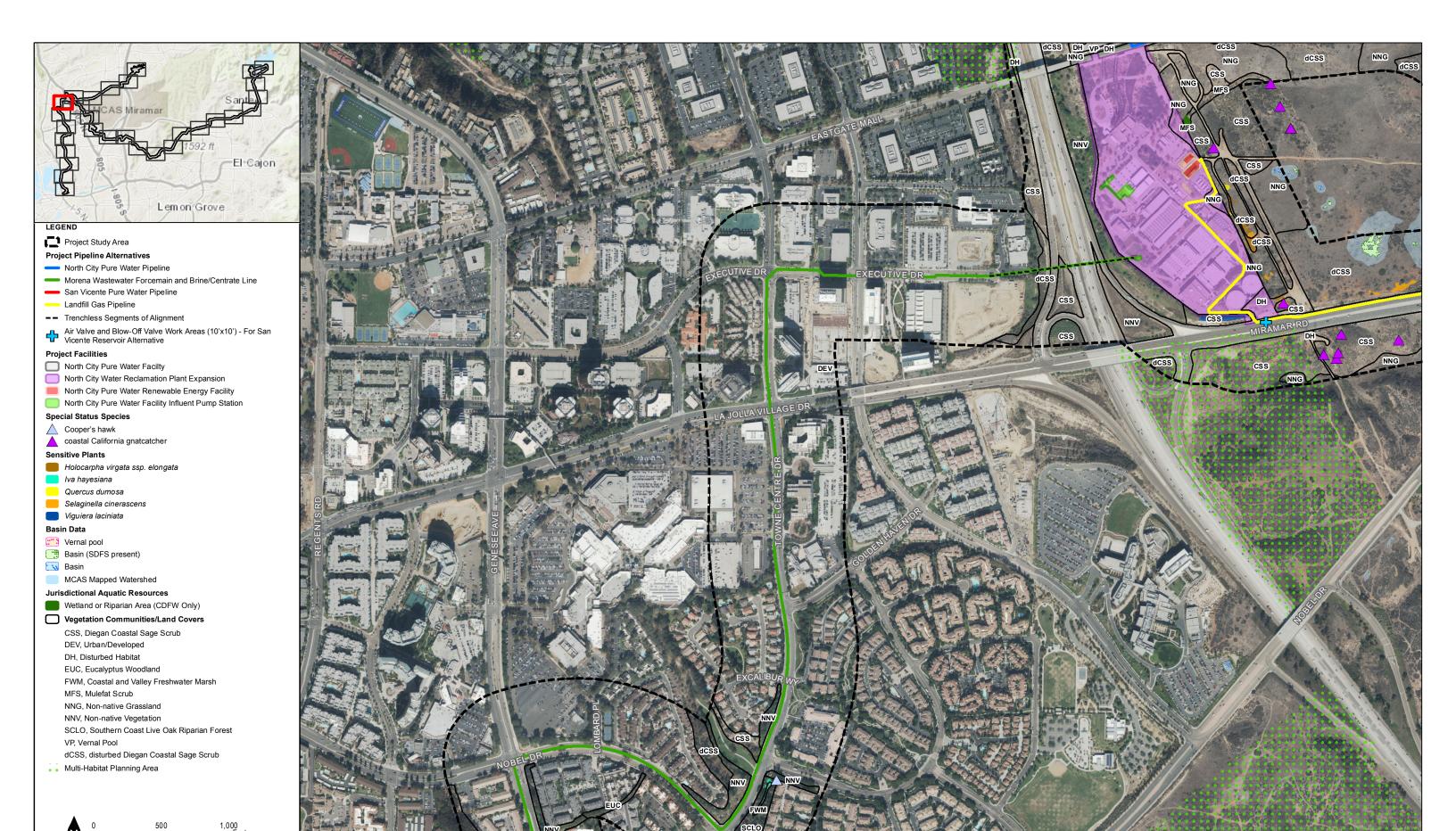




SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

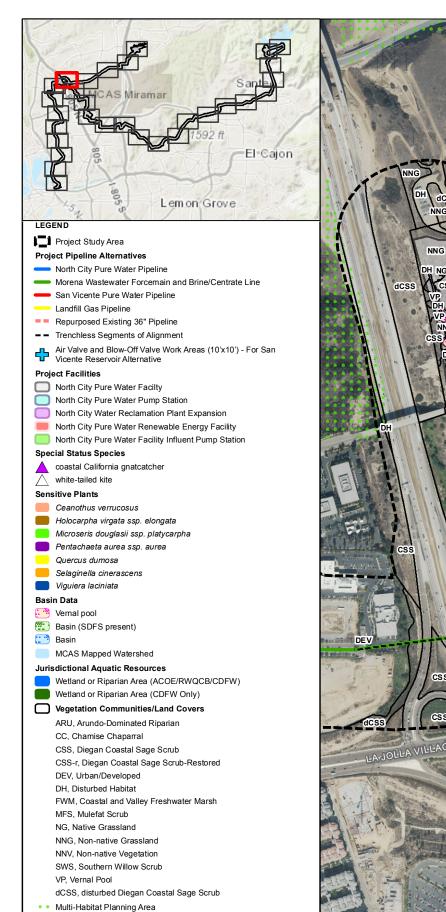
FIGURE 3-1G

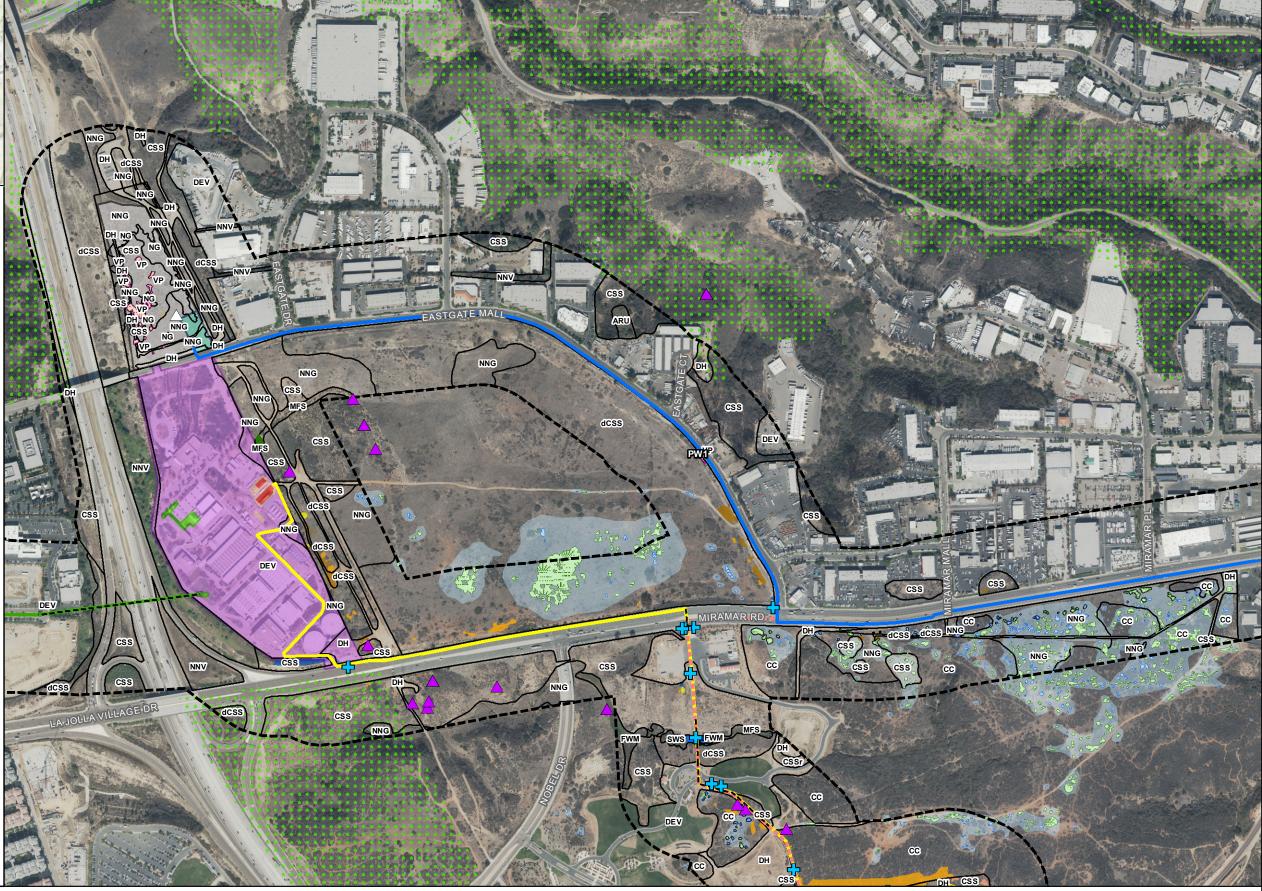
Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives





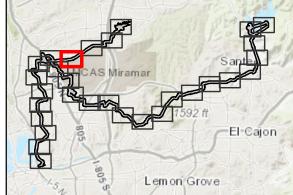
SOURCE: City of San Diego 2016, 2017; SANDAG, 2016







1,000 Feet SOURCE: City of San Diego 2016, 2017; SANDAG, 2016



Project Study Area

Project Pipeline Alternatives

- North City Pure Water Pipeline
- --- Trenchless Segments of Alignment

Special Status Species

▲ coastal California gnatcatcher

Sensitive Plants

Iva hayesiana

Basin Data

Basin (SDFS present)



MCAS Mapped Watershed

Vegetation Communities/Land Covers

CC, Chamise Chaparral

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NNV, Non-native Vegetation

SMX, Southern Mixed Chaparral

dCSS, disturbed Diegan Coastal Sage Scrub

Multi-Habitat Planning Area



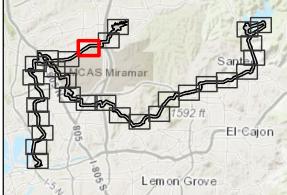


0 500 1,000

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1J

Biological Resources - Miramar Reservoir Alternative



Project Study Area

Project Pipeline Alternatives

North City Pure Water Pipeline

Vegetation Communities/Land Covers

CSSB, Diegan Coastal Sage Scrub: Baccharis-dominated

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

SWS, Southern Willow Scrub



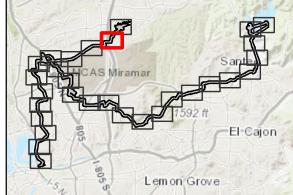


500 1,000 Feet

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1K

Biological Resources - Miramar Reservoir Alternative



Project Study Area

Project Pipeline Alternatives

- North City Pure Water Pipeline
- --- Trenchless Segments of Alignment

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

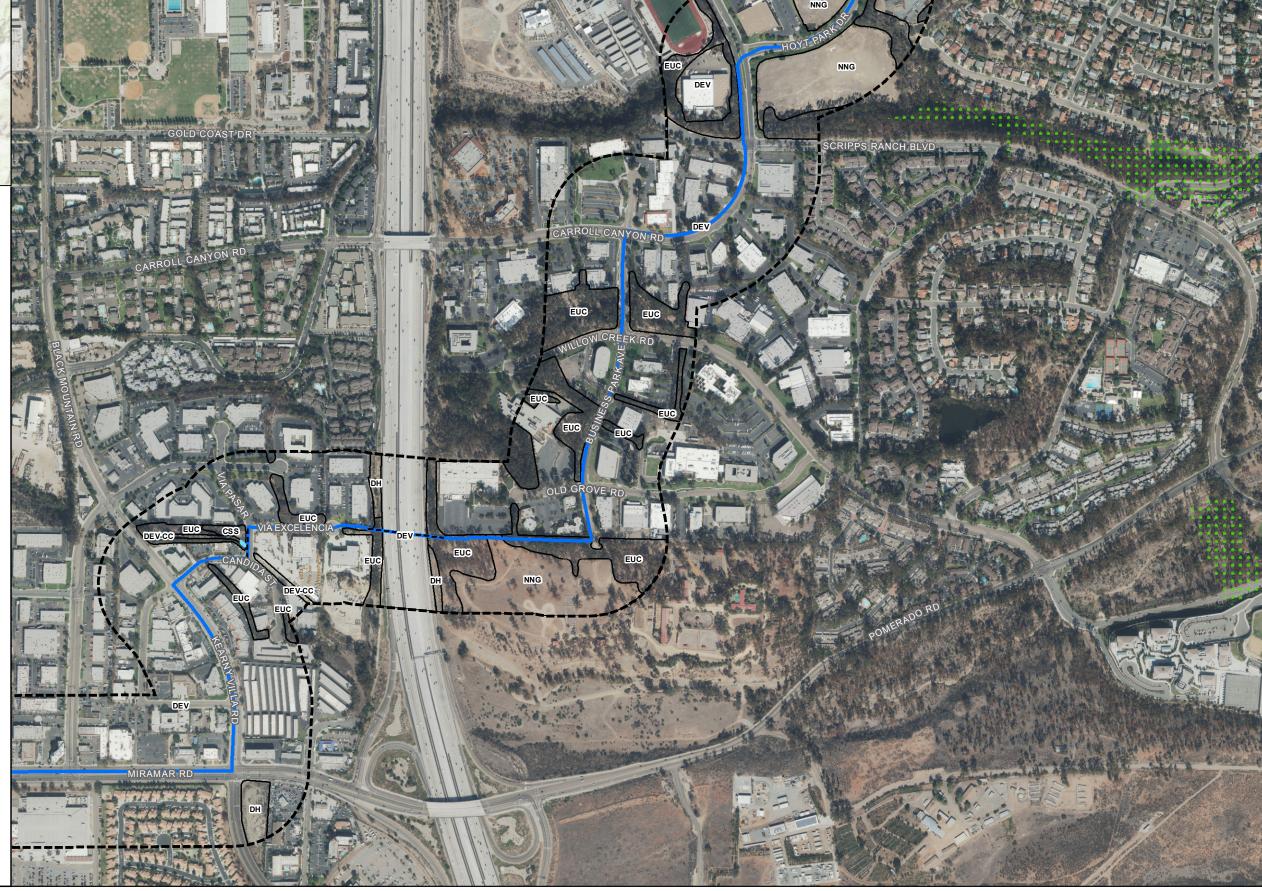
CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed
DEV-CC, Developed - Concrete Channel

DH, Disturbed Habitat

EUC, Eucalyptus Woodland NNG, Non-native Grassland

Multi-Habitat Planning Area



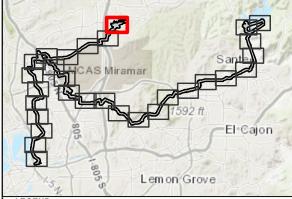


Feet

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1L

Biological Resources - Miramar Reservoir Alternative



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Project Study Area

Project Pipeline Alternatives

- North City Pure Water Pipeline
- North City Pure Water Pipeline Subaqueous Pipeline
- -- Trenchless Segments of Alignment

Project Facilities

Pure Water Dechlorination Facility

Miramar Water Treatment Plant Improvements and Pump Station

Special Status Species

western pond turtle

Sensitive Plants

Adolphia californica

Ferocactus viridescens

Pentachaeta aurea ssp. aurea

Quercus dumosa
Selaginella cinerascens

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Wetland or Riparian Area (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

CSS-CHP, Coastal Sage-Chaparral Transition

DEV, Urban/Developed

DH, Disturbed Habitat

DW, Disturbed Wetland

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

MFS, Mulefat Scrub

NNG, Non-native Grassland

NNV, Non-native Vegetation

NNW, Non-native Woodland

OW, Open Water

SMX, Southern Mixed Chaparral

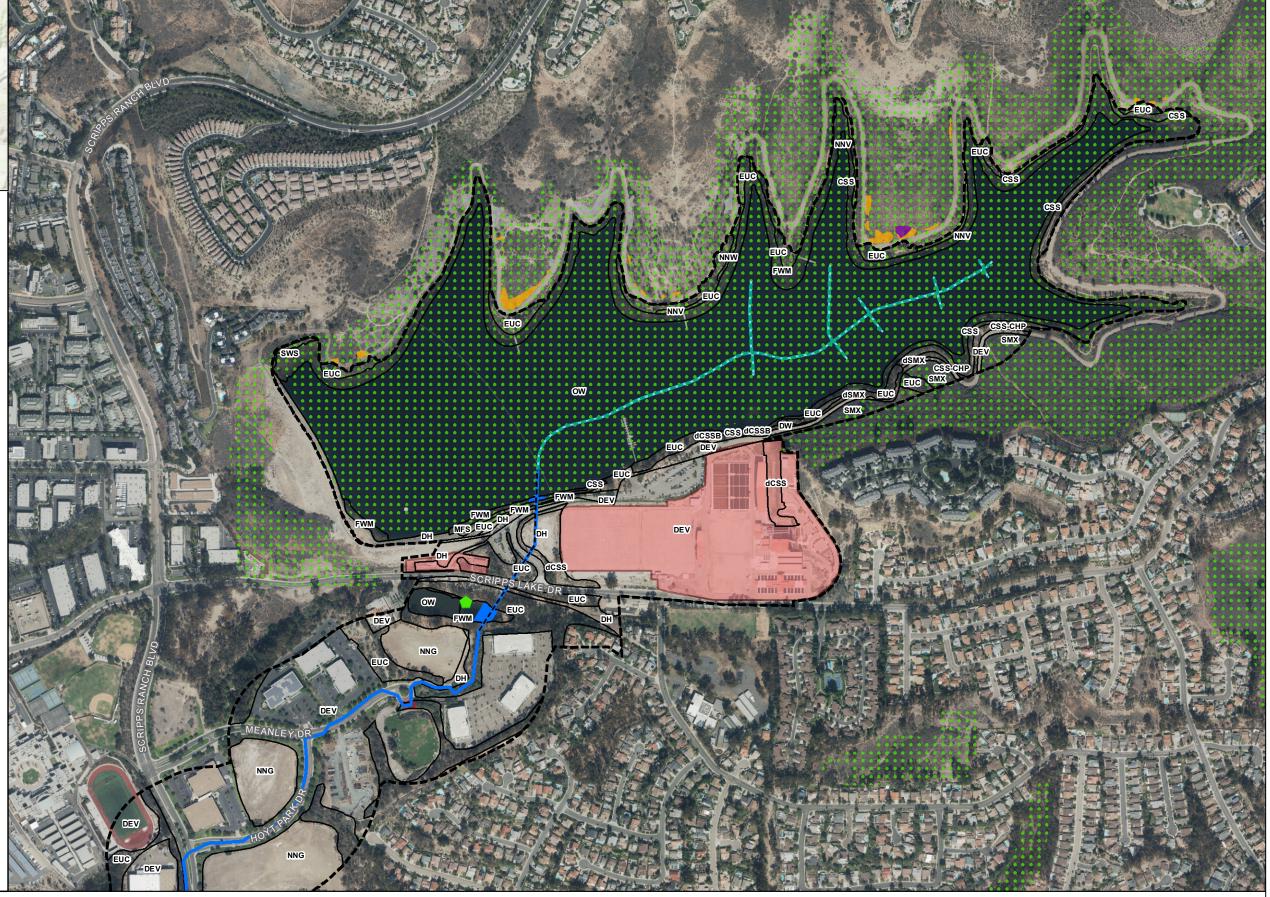
SWS, Southern Willow Scrub dCSS, disturbed Diegan Coastal Sage Scrub

dCSSB, disturbed Diegan Coastal Sage Scrub: Baccharis-

dominated

dSMX, disturbed Southern Mixed Chaparral

Multi-Habitat Planning Area

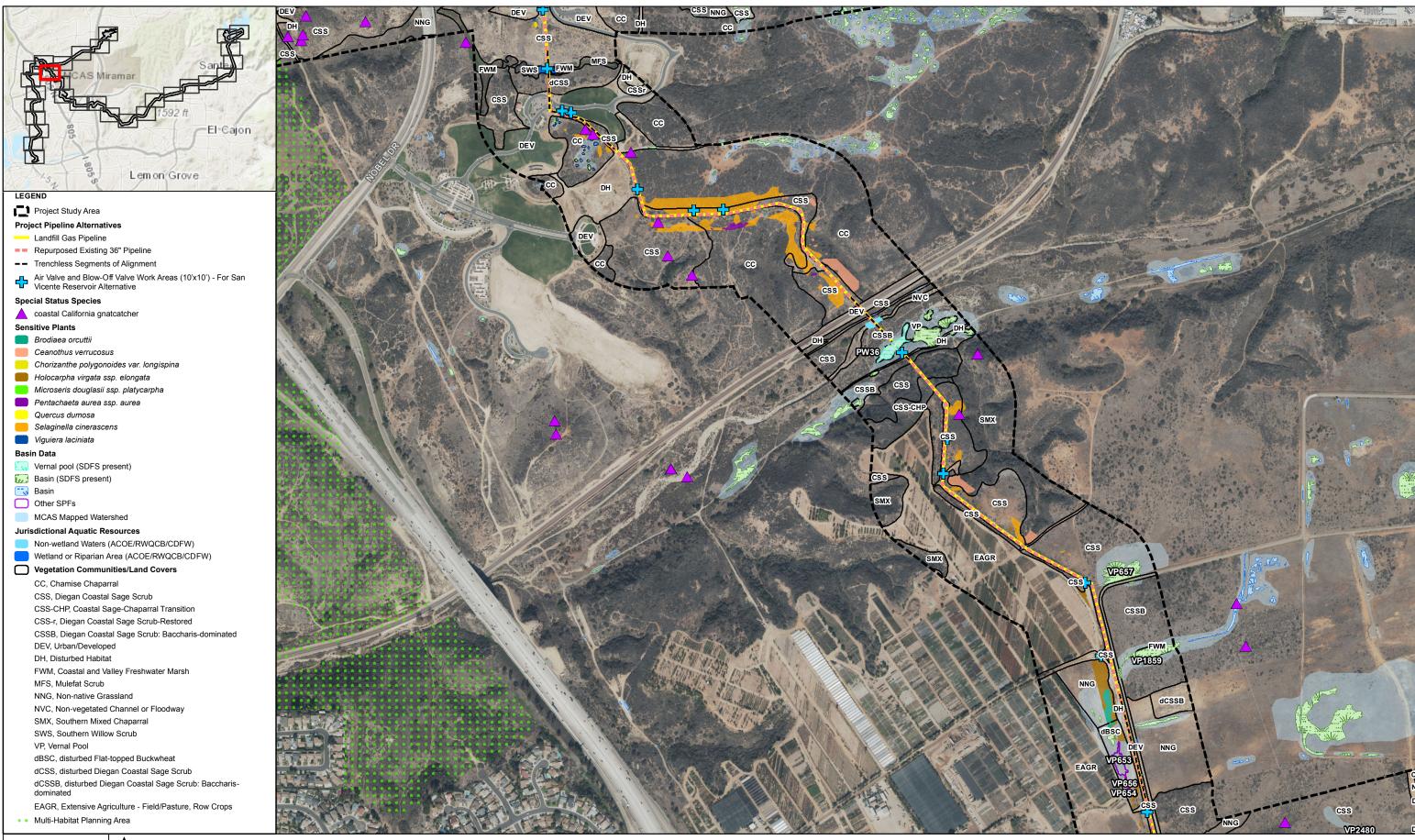




SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

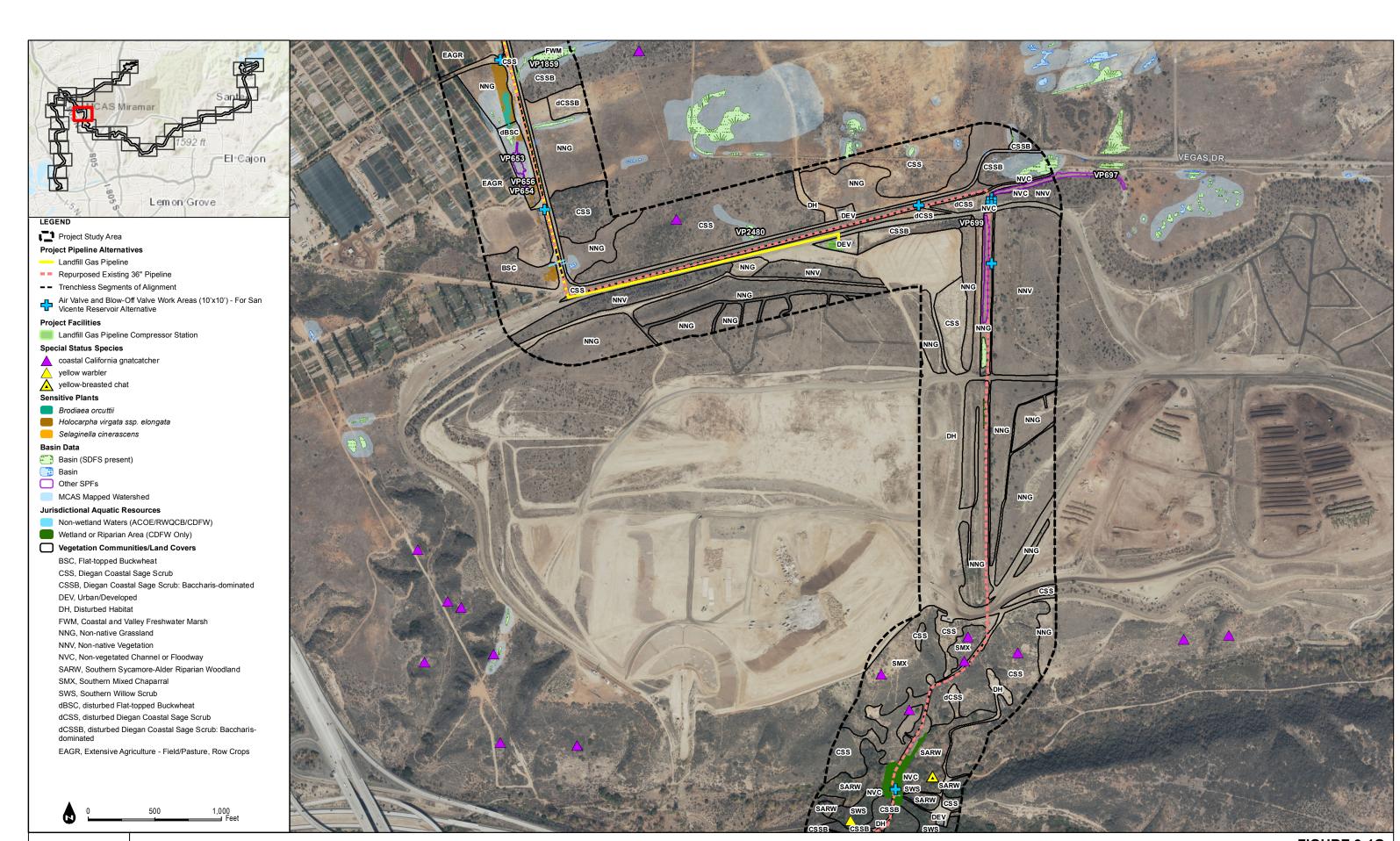
FIGURE 3-1M

Biological Resources - Miramar Reservoir Alternative





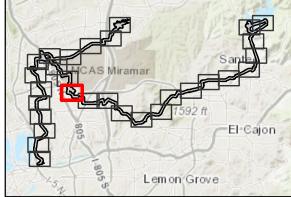
0 500 1,000 SOURCE: City of San Diego 2016, 2017; SANDAG, 2016 FIGURE 3-1N
Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-10



Project Study Area

Project Pipeline Alternatives

- San Vicente Pure Water Pipeline
- == Repurposed Existing 36" Pipeline
- Air Valve and Blow-Off Valve Work Areas (10'x10') For San Vicente Reservoir Alternative

Project Facilities

Metro Biosolids Center Improvements

Special Status Species

- coastal California gnatcatcher
- willow flycatcher
- yellow warbler yellow-breasted chat

Sensitive Plants

- Ceanothus verrucosus
- Chorizanthe polygonoides var. longispina
- Holocarpha virgata ssp. elongata
- Isocoma menziesii var. decumbens
- Quercus dumosa Selaginella cinerascens

Basin Data

- Wernal pool (SDFS present)
- Basin (SDFS present)
- Basin

Jurisdictional Aquatic Resources

- Non-wetland Waters (ACOE/RWQCB/CDFW)
- Wetland or Riparian Area (CDFW Only) Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub CSS-CHP, Coastal Sage-Chaparral Transition

CSSB, Diegan Coastal Sage Scrub: Baccharis-dominated

DEV, Urban/Developed

DH, Disturbed Habitat

NNG, Non-native Grassland

NNV, Non-native Vegetation

NVC, Non-vegetated Channel or Floodway

SARW, Southern Sycamore-Alder Riparian Woodland

SMX, Southern Mixed Chaparral

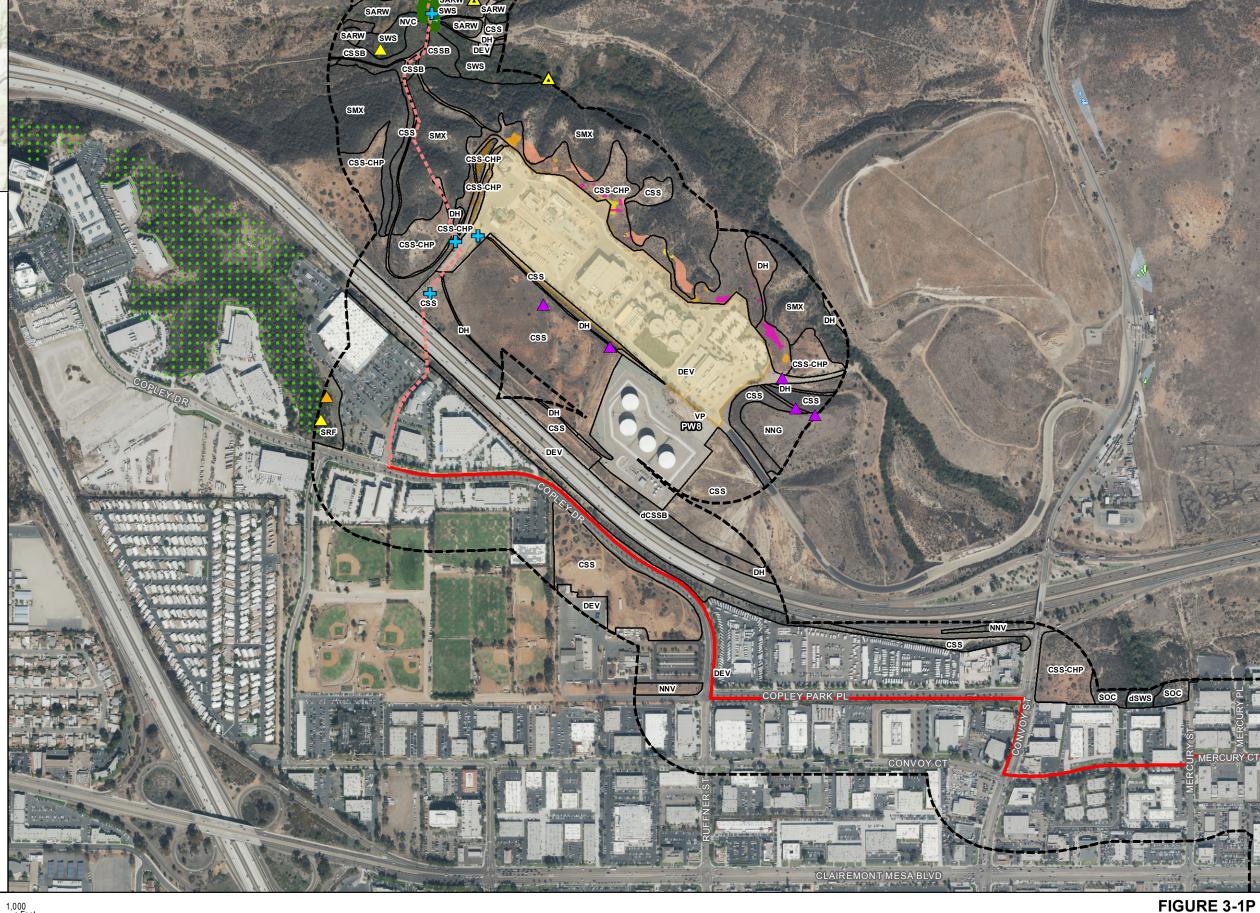
SOC, Scrub Oak Chaparral

SRF, Southern Riparian Forest SWS, Southern Willow Scrub

dCSSB, disturbed Diegan Coastal Sage Scrub: Baccharis-

dSWS, disturbed Southern Willow Scrub

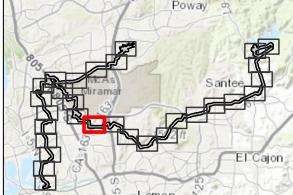
• • Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

Biological Resources - Miramar Reservoir and San Vicente Reservoir Alternatives



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

--- Trenchless Segments of Alignment

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub
CSS-CHP, Coastal Sage-Chaparral Transition

DEV, Urban/Developed EUC, Eucalyptus Woodland

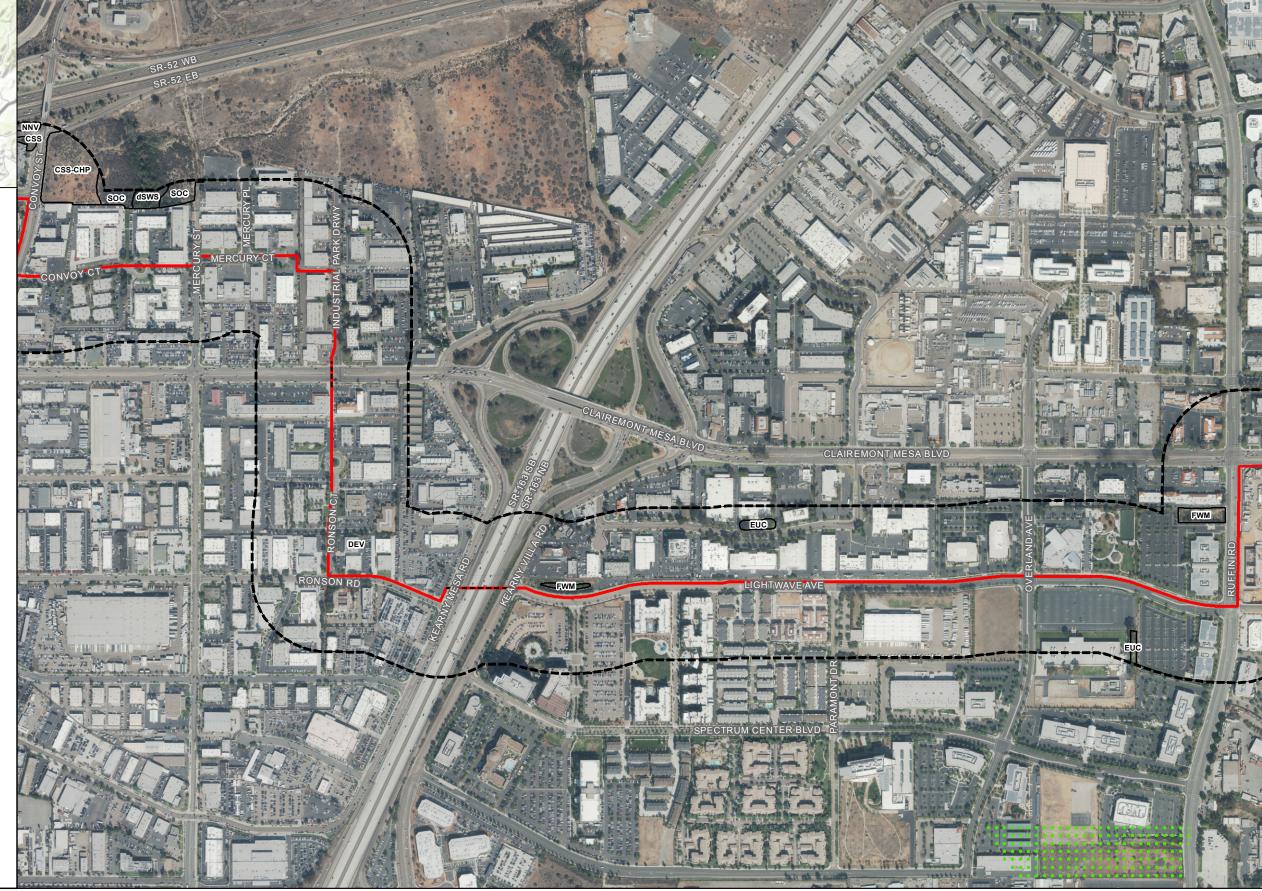
FWM, Coastal and Valley Freshwater Marsh

NNV, Non-native Vegetation

SOC, Scrub Oak Chaparral

dSWS, disturbed Southern Willow Scrub

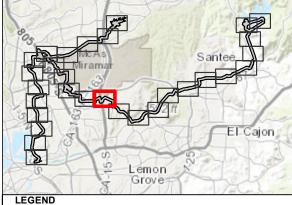
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1Q



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

-- Trenchless Segments of Alignment

Special Status Species

coastal California gnatcatcher

least Bell's vireo

yellow warbler

Sensitive Plants

Ferocactus viridescens

Viguiera laciniata

Lepidium virginicum var. robinsonii

Viguiera laciniata

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Wetland or Riparian Area (CDFW Only)

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

CSSB, Diegan Coastal Sage Scrub: Baccharis-dominated

DEV, Urban/Developed

DH, Disturbed Habitat

DW, Disturbed Wetland

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

NG, Native Grassland

NNV, Non-native Vegetation

NVC, Non-vegetated Channel or Floodway

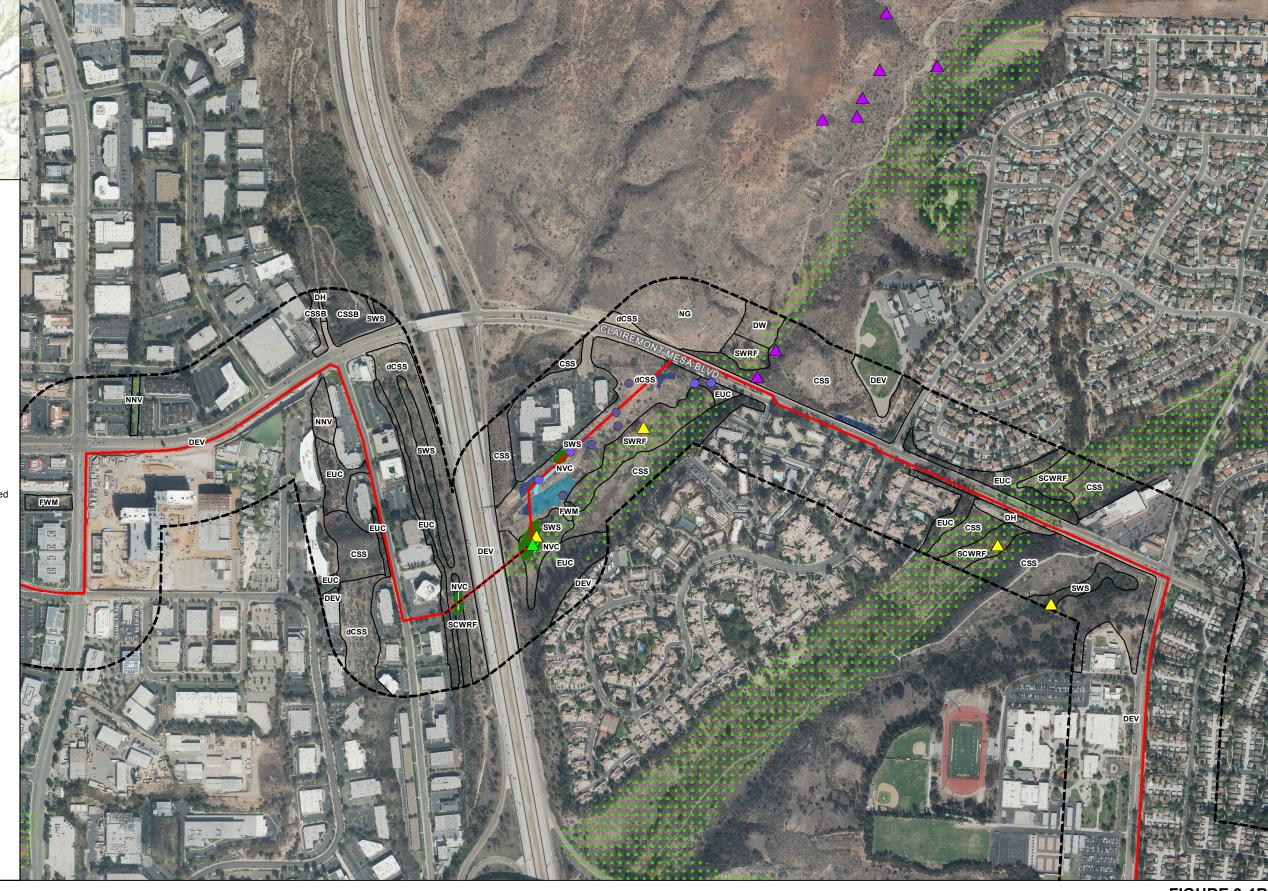
SCWRF, Southern Cottonwood-Willow Riparian Forest

SWRF, Southern Arroyo Willow Riparian Forest

SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage Scrub

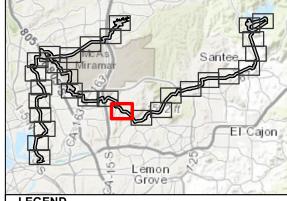
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1R



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

Special Status Species

Cooper's hawk yellow warbler

Sensitive Plants

Viguiera laciniata

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

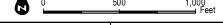
EUC, Eucalyptus Woodland

NNV, Non-native Vegetation SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage Scrub

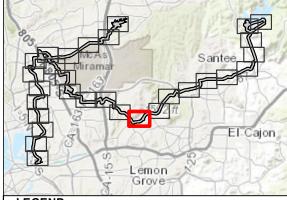
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1S



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

--- Trenchless Segments of Alignment

Project Facilities

Mission Trails Booster Station

Special Status Species

coastal California gnatcatcher

yellow warbler

Sensitive Plants

Viguiera laciniata

Viguiera laciniata

Federally Designated Critical Habitat

Least Bell's Vireo

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

ARU, Arundo-Dominated Riparian

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

FWM, Coastal and Valley Freshwater Marsh

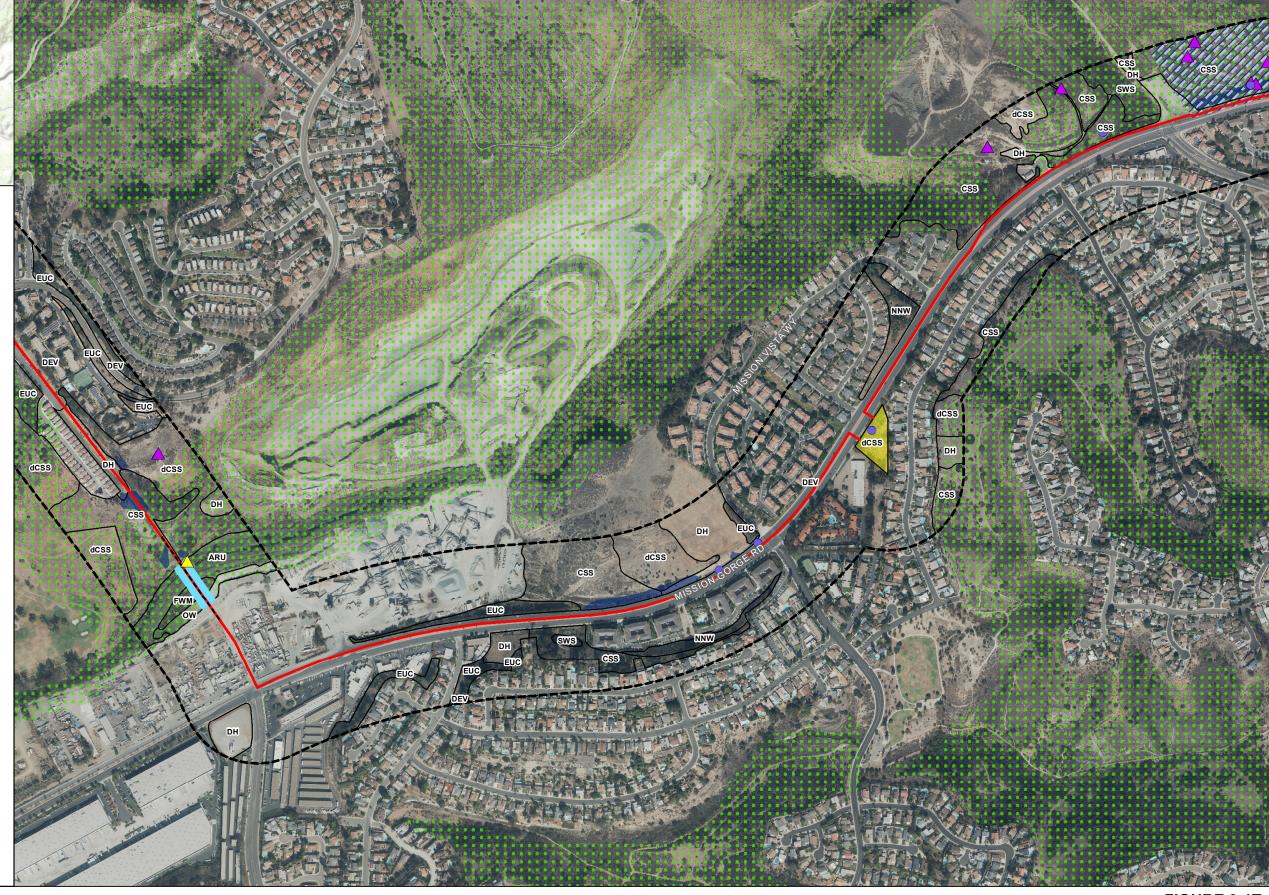
NNW, Non-native Woodland

OW, Open Water

SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage Scrub

Multi-Habitat Planning Area

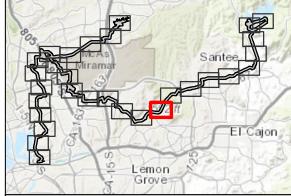




500 1,000

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1T



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

Special Status Species

- coastal California gnatcatcher
- mule deer
- orangethroat whiptail
- rosy boa
- southern California rufous-crowned sparrow
- two-striped gartersnake

Sensitive Plants

- Lepidium virginicum var. robinsonii
- Viguiera laciniata

Federally Designated Critical Habitat

Least Bell's Vireo

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

NNG, Non-native Grassland

NNV, Non-native Vegetation

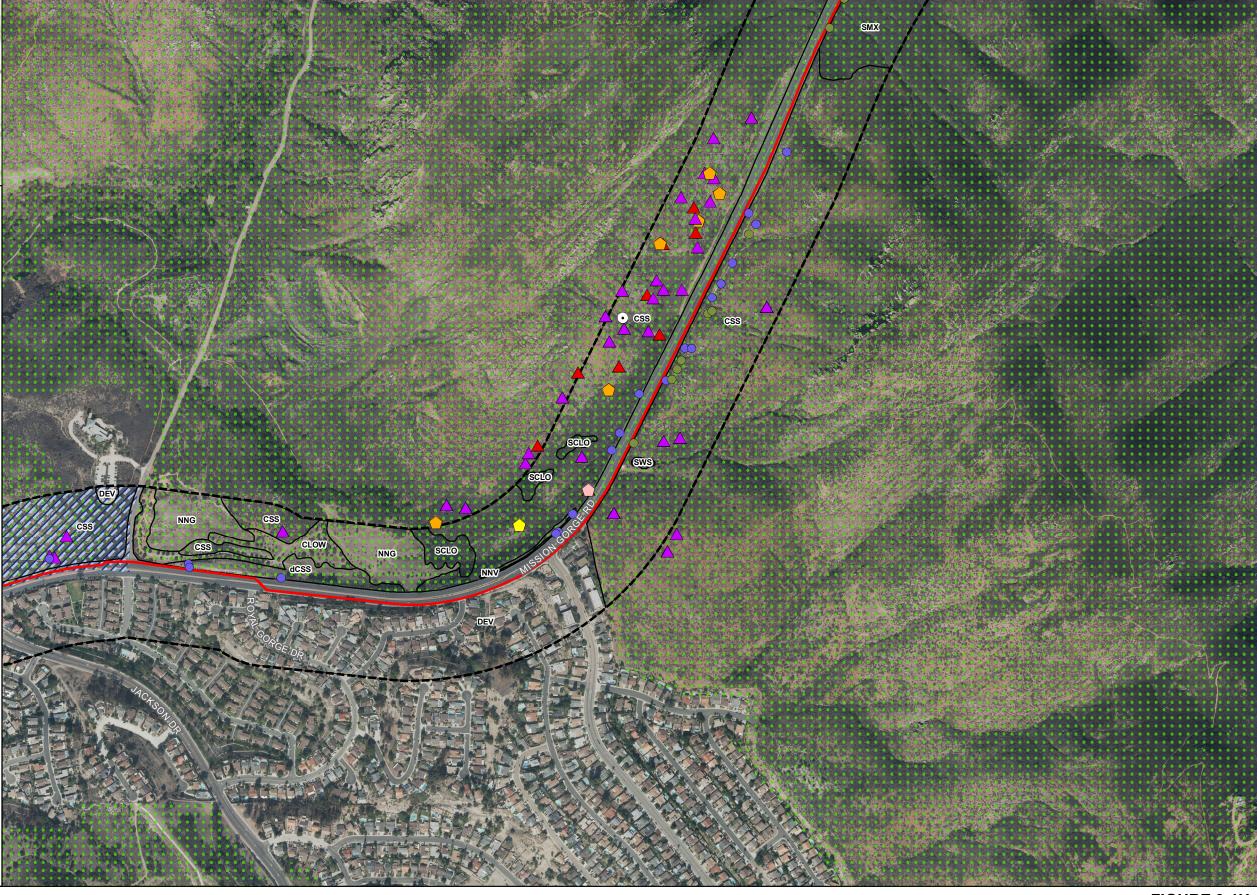
SCLO, Southern Coast Live Oak Riparian Forest

SMX, Southern Mixed Chaparral

SWS, Southern Willow Scrub

dCSS, disturbed Diegan Coastal Sage Scrub

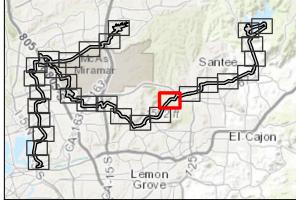
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1U



Project Study Area

Project Pipeline Alternatives

- San Vicente Pure Water Pipeline
- --- Trenchless Segments of Alignment

Special Status Species

- Cooper's hawk
- least Bell's vireo
- mule deer
- orangethroat whiptail
- southern California rufous-crowned sparrow
- yellow warbler
- yellow-breasted chat

Sensitive Plants

- Juglans californica
- Lepidium virginicum var. robinsonii
- Viguiera laciniata
- Viguiera laciniata

Federally Designated Critical Habitat

Least Bell's Vireo

San Diego Ambrosia

Jurisdictional Aquatic Resources

- Non-wetland Waters (ACOE/RWQCB/CDFW)
- Wetland or Riparian Area (ACOE/RWQCB/CDFW)
- Wetland or Riparian Area (CDFW Only)

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

NNG, Non-native Grassland

NNV, Non-native Vegetation

NNW, Non-native Woodland

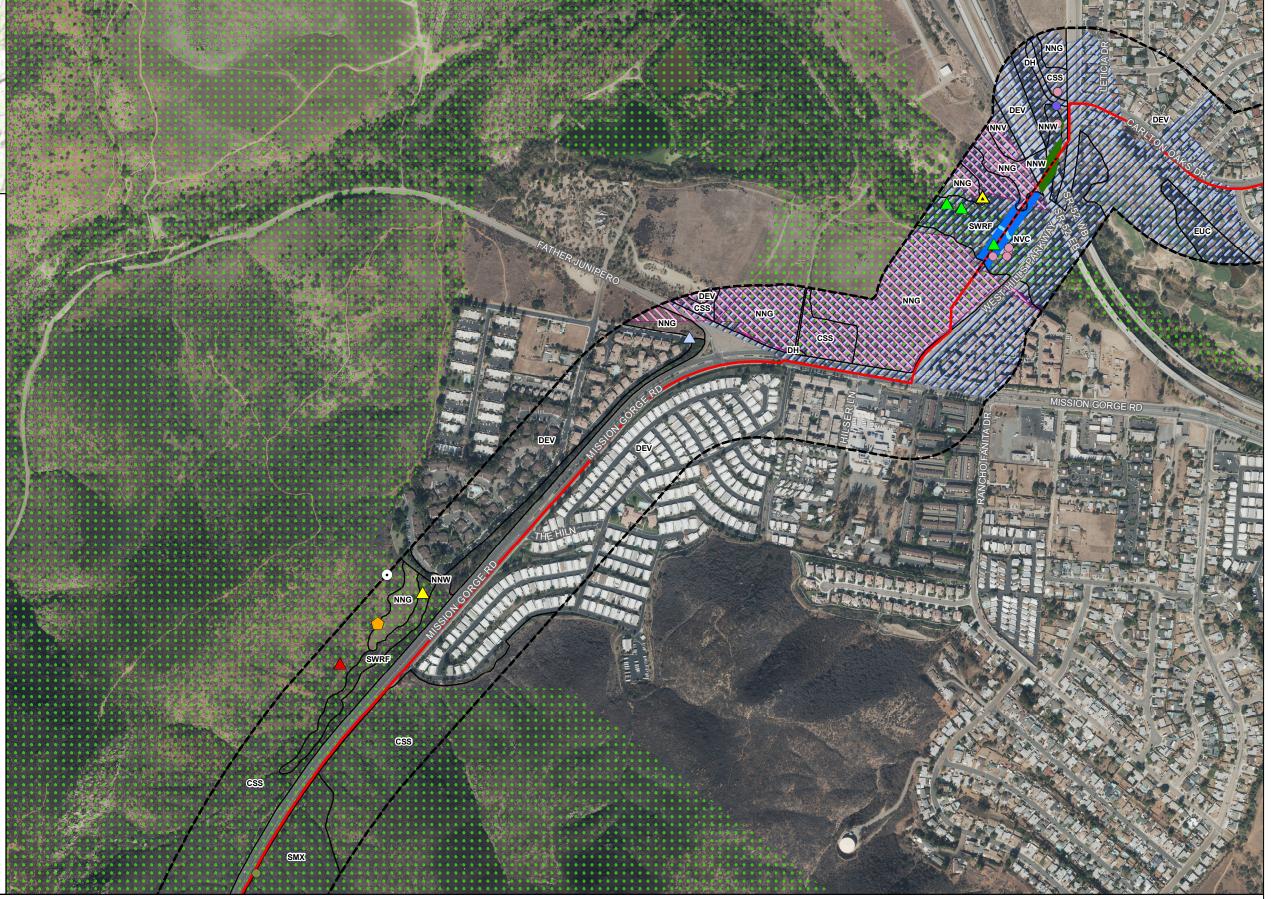
NVC, Non-vegetated Channel or Floodway

SMX, Southern Mixed Chaparral

SWRF, Southern Arroyo Willow Riparian Forest

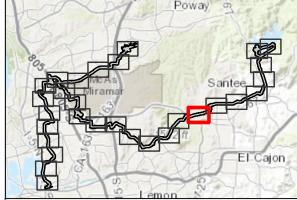
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1V



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

--- Trenchless Segments of Alignment

Special Status Species

least Bell's vireo

yellow-breasted chat

Federally Designated Critical Habitat

Least Bell's Vireo

Jurisdictional Aquatic Resources

Wetland or Riparian Area (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

DEV, Urban/Developed

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

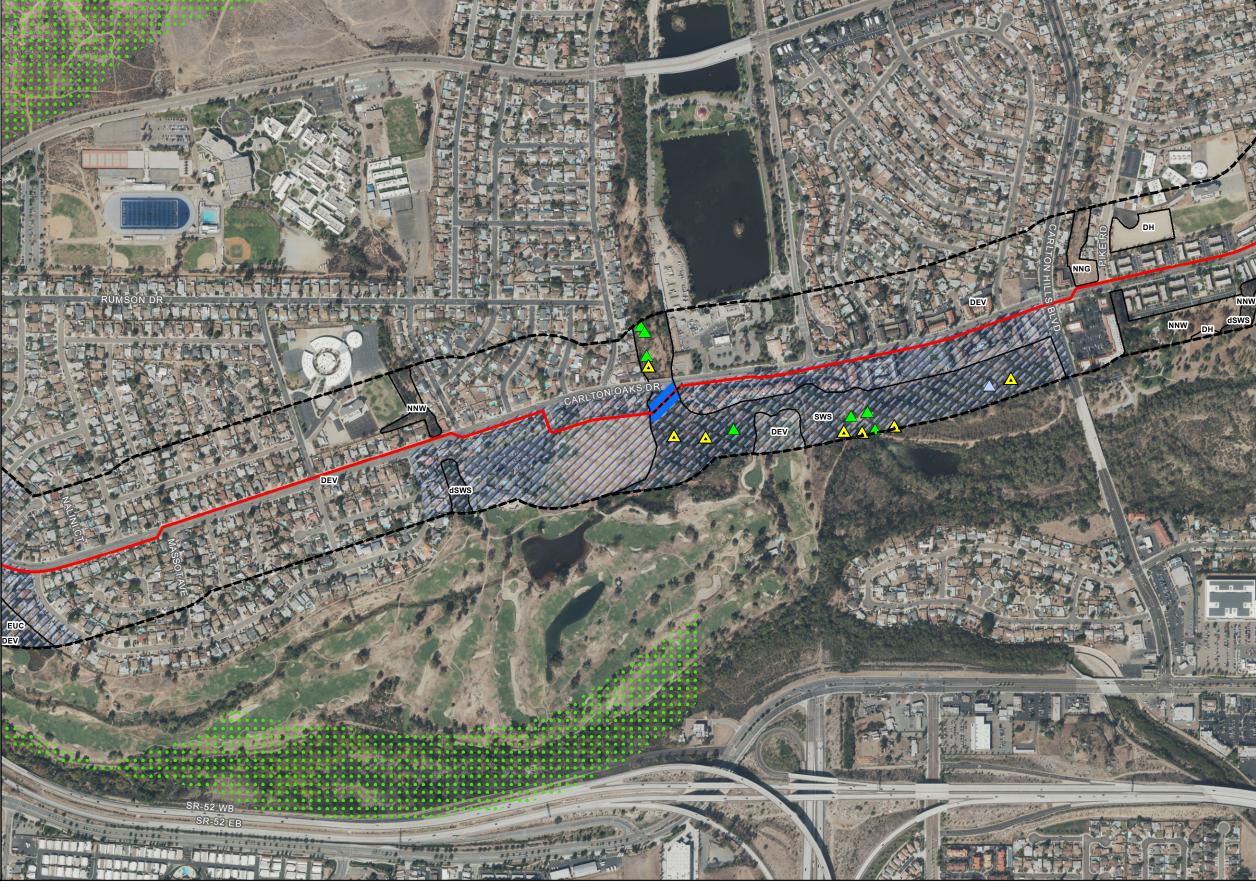
NNG, Non-native Grassland

NNW, Non-native Woodland

SWS, Southern Willow Scrub

dSWS, disturbed Southern Willow Scrub

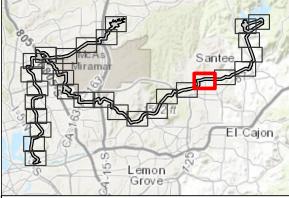
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1W



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

Special Status Species

least Bell's vireo

yellow warbler

Federally Designated Critical Habitat

Coastal California Gnatcatcher

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DEV-CC, Developed - Concrete Channel

DH, Disturbed Habitat

EUC, Eucalyptus Woodland

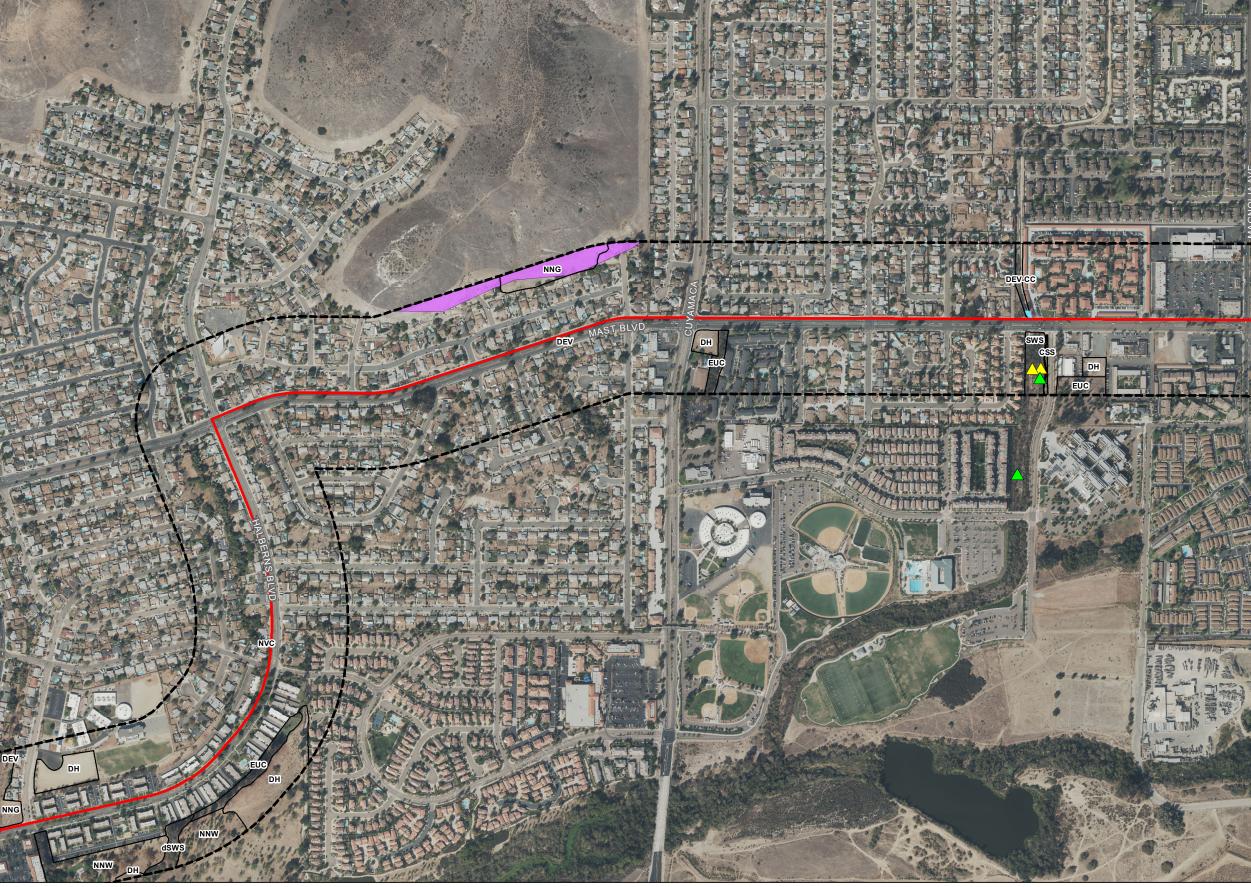
NNG, Non-native Grassland

NNW, Non-native Woodland

NVC, Non-vegetated Channel or Floodway

SWS, Southern Willow Scrub

dSWS, disturbed Southern Willow Scrub

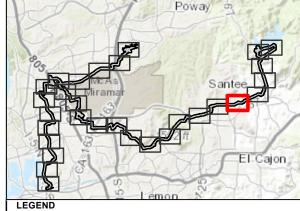




500 1,000

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1X



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

Special Status Species

coastal California gnatcatcher

Jurisdictional Aquatic Resources

Potential Wetland or Riparian Area (ACOE/RWQCB/CDFW)

Wetland or Riparian Area (RWQCB/CDFW)

Vegetation Communities/Land Covers

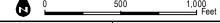
CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

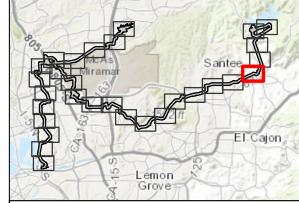
DH, Disturbed Habitat

NNG, Non-native Grassland





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

Special Status Species

Cooper's hawk

▲ Western bluebird

▲ brown-headed cowbird

coastal California gnatcatcher

least Bell's vireo

yellow warbler

yellow-breasted chat

Sensitive Plants

Viguiera laciniata

Viguiera laciniata

Vegetation Communities/Land Covers

CSS, Diegan Coastal Sage Scrub DEV, Urban/Developed DH, Disturbed Habitat

NNG, Non-native Grassland

NVC, Non-vegetated Channel or Floodway

OW, Open Water

SCWRF, Southern Cottonwood-Willow Riparian Forest

SWRF, Southern Arroyo Willow Riparian Forest

SWS, Southern Willow Scrub





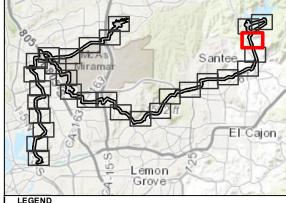
DUDEK

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016



DUDEK

SOURCE: City of San Diego 2016, 2017; SANDAG, 2016



Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

San Vicente Pure Water Pipeline - In-Reservoir Alternative

San Vicente Pure Water Pipeline - Marina Alternative

Special Status Species

southern California rufous-crowned sparrow yellow warbler

Viguiera laciniata

Sensitive Plants

Jurisdictional Aquatic Resources

Non-wetland Water (ACOE/RWCQB)/Riparian Area (CDFW)

Vegetation Communities/Land Covers

AGR, General Agriculture

ARU, Arundo-Dominated Riparian

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

DEV, Urban/Developed

DH, Disturbed Habitat MFS, Mulefat Scrub

NNG, Non-native Grassland

dMFS, disturbed Mulefat Scrub

Multi-Habitat Planning Area

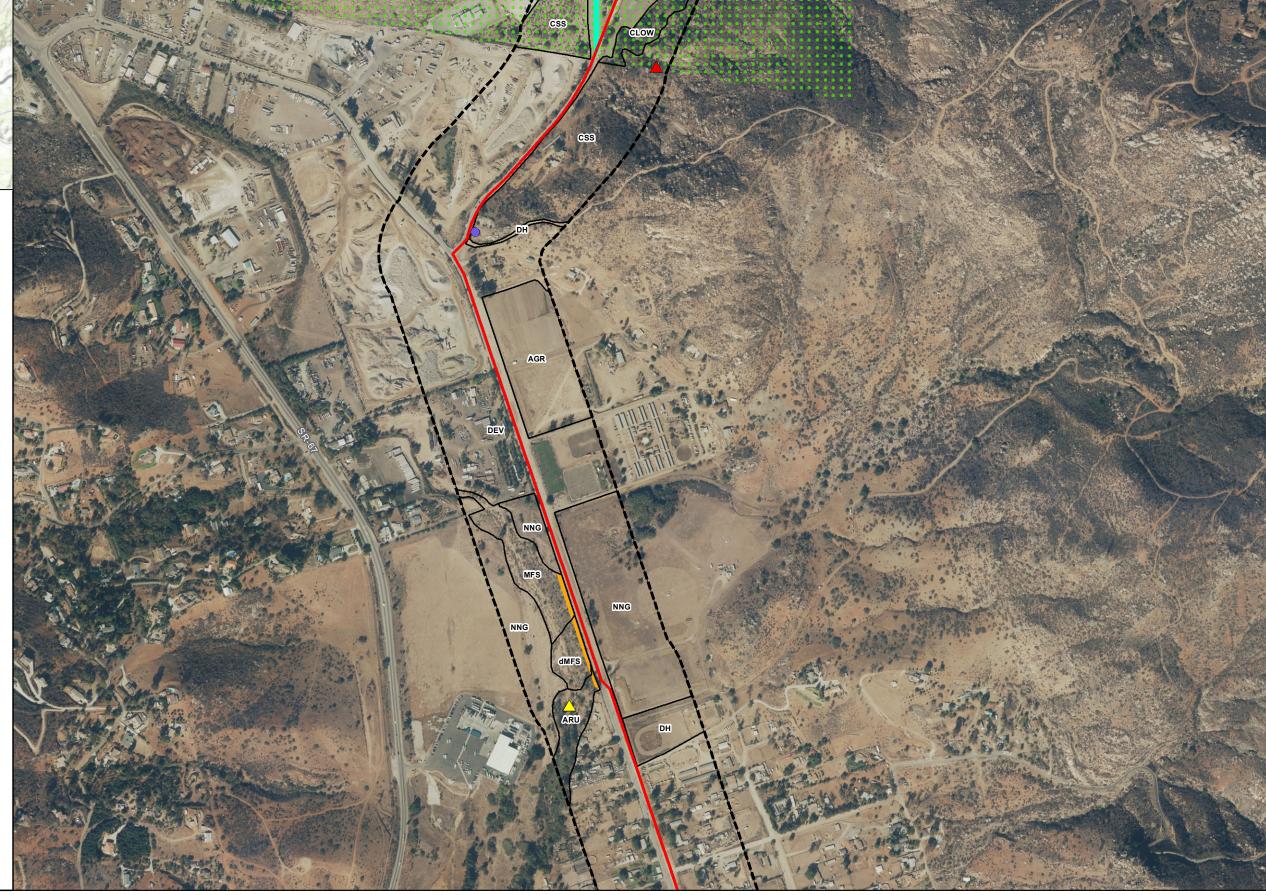
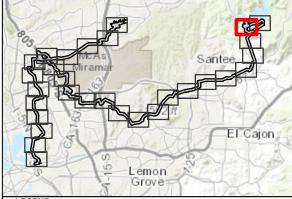




FIGURE 3-1AB



LEGENE

Project Study Area

Project Pipeline Alternatives

San Vicente Pure Water Pipeline

San Vicente Pure Water Pipeline - In-Reservoir Alternative

San Vicente Pure Water Pipeline - Tunnel Alternative

San Vicente Pure Water Pipeline - Marina Alternative

-- Trenchless Segments of Alignment

Special Status Species

coastal California gnatcatcher

southern California rufous-crowned sparrow

Sensitive Plants

Clarkia delicata

Lepidium virginicum var. robinsonii

Pseudognaphalium leucocephalum

Viguiera laciniata

Lepidium virginicum var. robinsonii

Pseudognaphalium leucocephalum

Selaginella cinerascens
Viguiera laciniata

Jurisdictional Aquatic Resources

Non-wetland Waters (ACOE/RWQCB/CDFW)

Vegetation Communities/Land Covers

CLOW, Coast Live Oak Woodland

CSS, Diegan Coastal Sage Scrub

CSS-r, Diegan Coastal Sage Scrub-Restored

DEV, Urban/Developed

DH, Disturbed Habitat

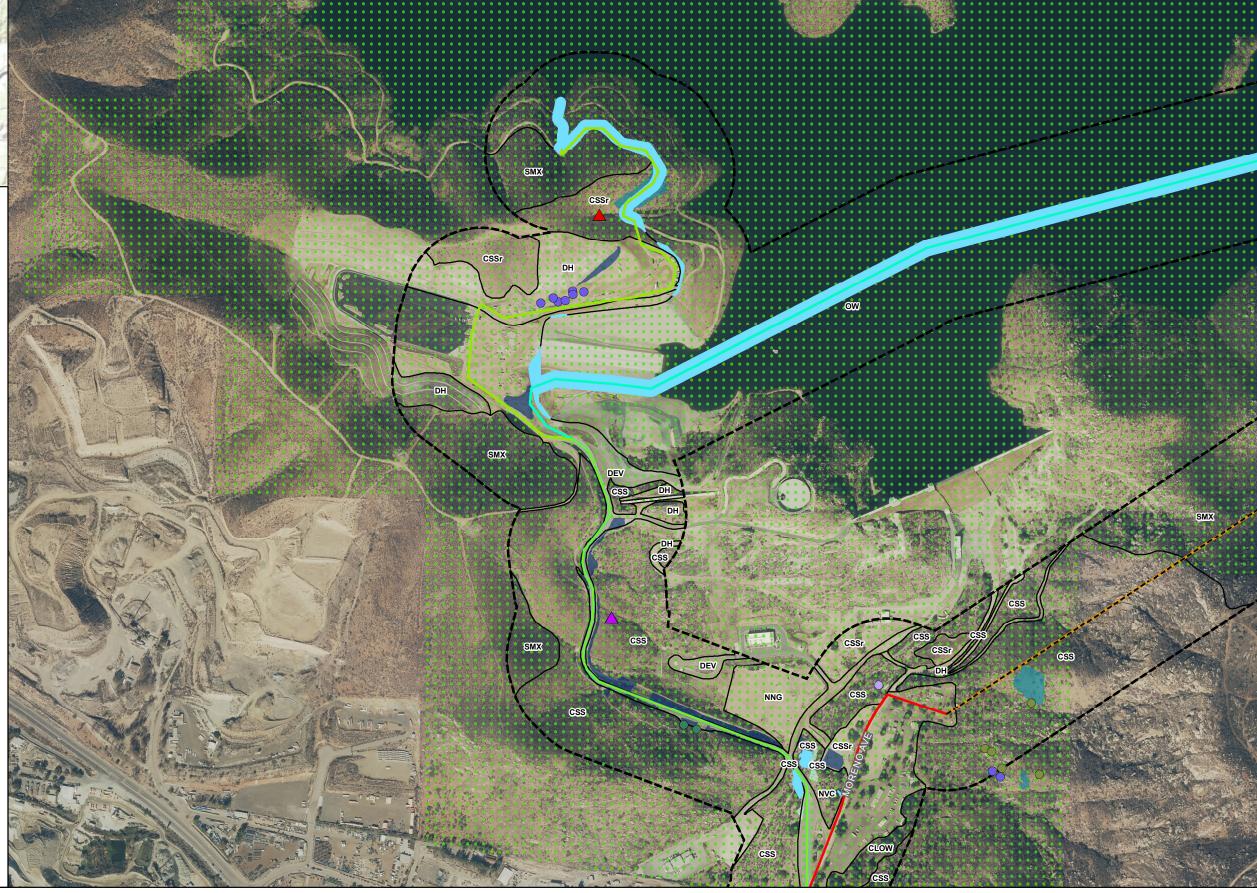
NNG, Non-native Grassland

NVC, Non-vegetated Channel or Floodway

OW, Open Water

SMX, Southern Mixed Chaparral

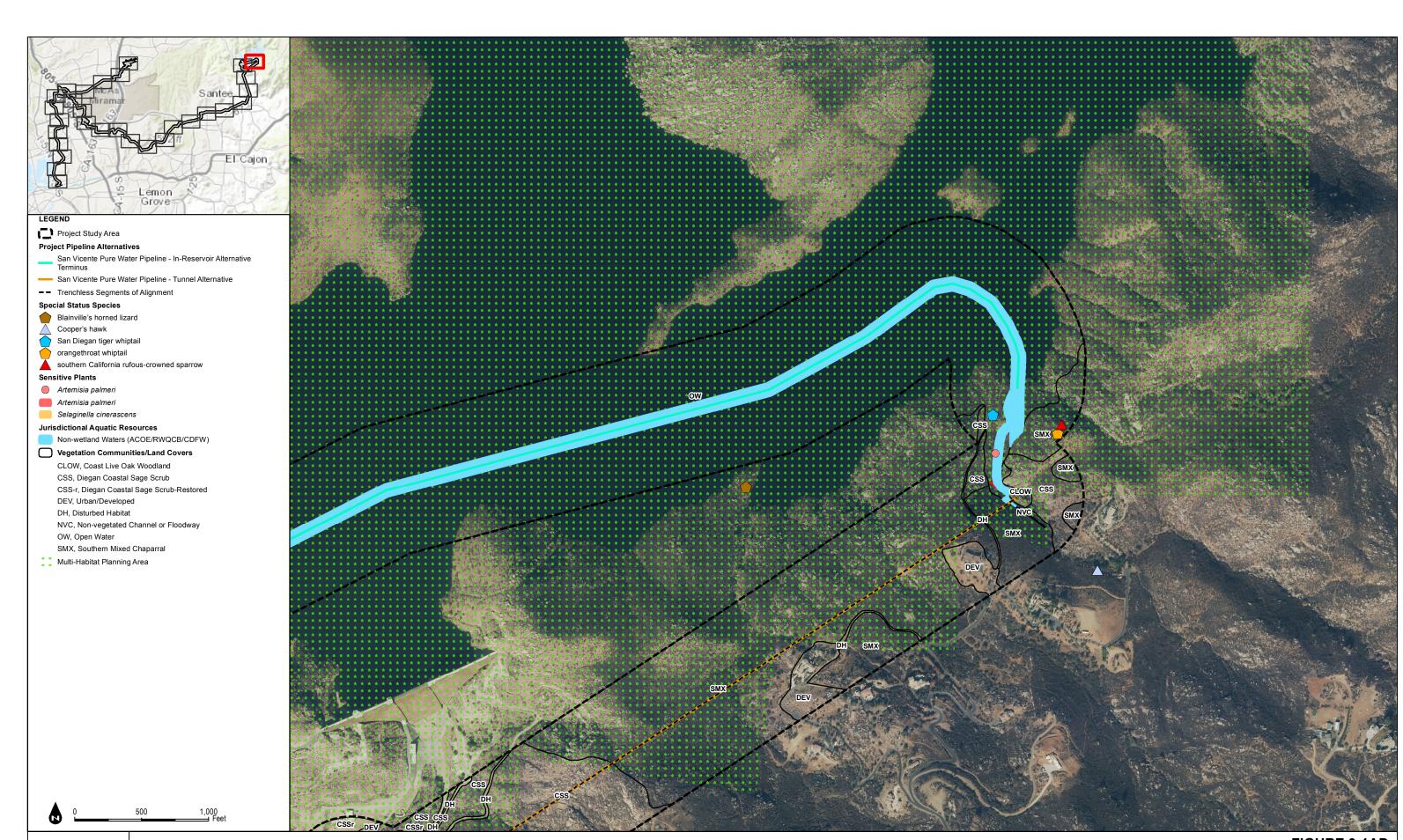
Multi-Habitat Planning Area





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016

FIGURE 3-1AC





SOURCE: City of San Diego 2016, 2017; SANDAG, 2016